ANNUAL REPORT

1989-1990

Hon. O.P.J. (Jim) Kelland
Minister
Department of Environment and Lands

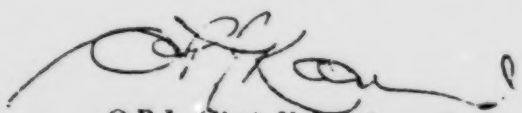
Minister of Environment and Lands
Province of Newfoundland
May 29, 1991

To His Honour James McGrath
Lieutenant-Governor of the Province
of Newfoundland

May it please your Honour:

It is my privilege to submit the Annual Report of the Department of Environment and Lands, Government of Newfoundland and Labrador, for the fiscal year ended March 31, 1990.

Respectfully submitted,



O.P.J. (Jim) Kelland,
Minister.

Deputy Minister of Environment and Lands
Province of Newfoundland
May 29, 1991

Honourable O.P.J. (Jim) Kelland
Minister of Environment and Lands

Sir:

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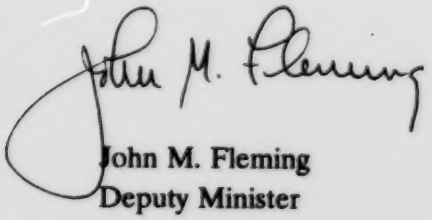
Respectfully Submitted,



John M. Fleming
Deputy Minister

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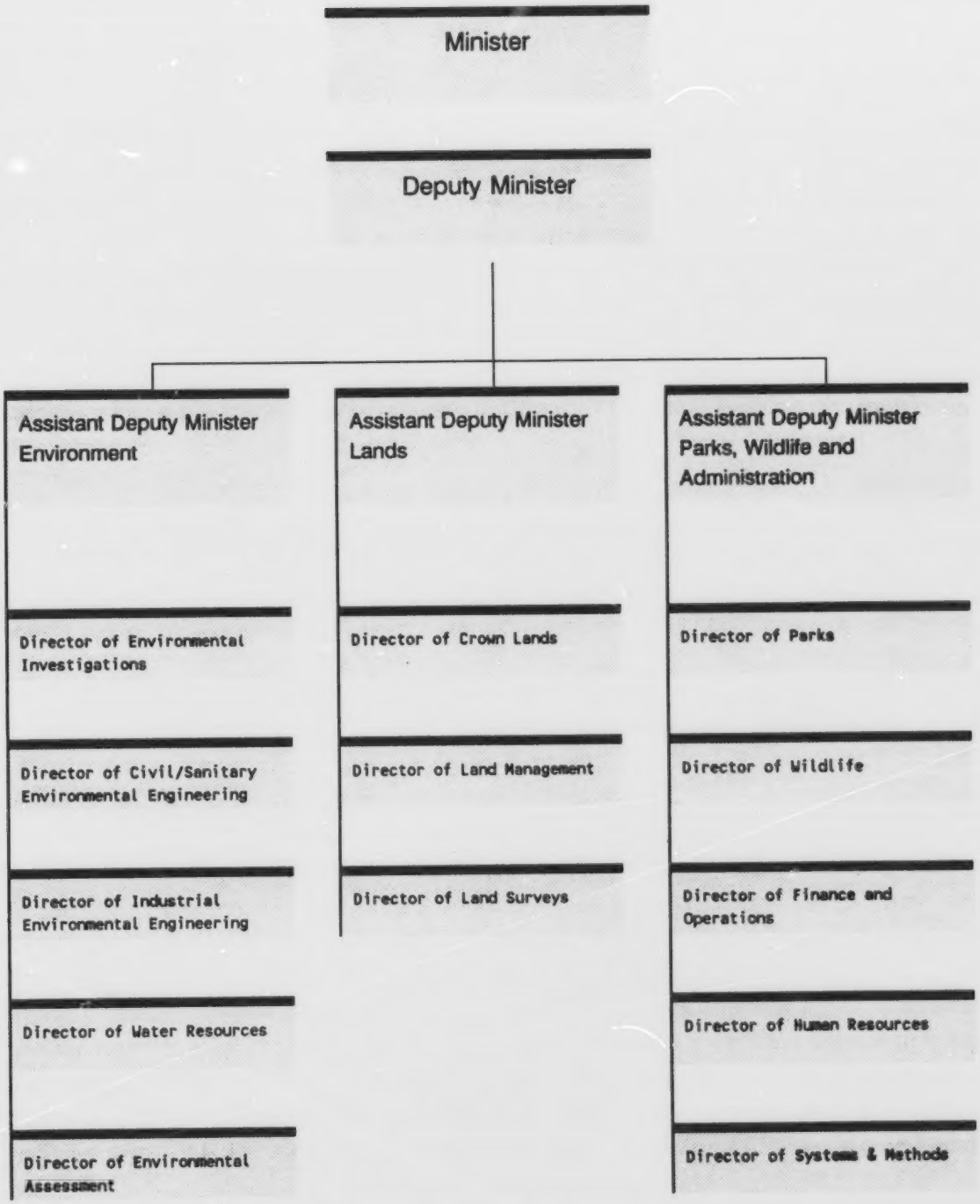
FOREWORD

The Department of Environment and Lands is responsible for the protection and enhancement of the environment, controlling air, water and soil pollution and managing the water resources of the Province. The Environment Branch's functions include the development and implementation of appropriate water resource management policies, environmental impact assessments of major development projects, industrial/domestic waste disposal, as well as the regulation and control of pesticide storage, use, transportation and disposal.

The Department is also vested with the responsibility for the management, allocation and development of Crown Land for the economic and social benefit of the Province. This includes mapping, surveying and registration of all Crown Lands.

The Department's responsibilities also incorporate the management and protection of the Province's wildlife resource. Further, through a network of provincial parks, the Department provides residents and visitors with opportunities for outdoor recreational pursuits. The mandate includes the preservation of our unique natural heritage resources through the Wilderness and Ecological Reserves Program.

ORGANIZATIONAL CHART


Minister
Deputy Minister
Assistant Deputy Minister Environment
Director of Environmental Investigations
Director of Civil/Sanitary Environmental Engineering
Director of Industrial Environmental Engineering
Director of Water Resources
Director of Environmental Assessment
Assistant Deputy Minister Lands
Director of Crown Lands
Director of Land Management
Director of Land Surveys
Assistant Deputy Minister Parks, Wildlife and Administration
Director of Parks
Director of Wildlife
Director of Finance and Operations
Director of Human Resources
Director of Systems & Methods

ENVIRONMENTAL INVESTIGATIONS DIVISION

Carl Strong - Director

INTRODUCTION

The Environmental Investigations Division is responsible for the enforcement of The Waste Material (Disposal) Act. This involves monitoring of commercial, municipal, and hazardous wastes and ensuring that they are disposed of in an environmentally acceptable manner. The Division is also responsible for processing applications for fuel storage systems and providing inspections for these systems. Other activities include the spill response program, livestock developments, and small scale development referrals and assessments.

The Environmental Investigations Division has a total of twenty-two permanent staff members located at the headquarters office in the Confederation Building, St. John's, and throughout the five regional offices located in Goose Bay, Corner Brook, Grand Falls, Clarenville and St. John's.

PROGRAMS AND SERVICES

Office Waste Paper Recycling

Until 1989, recycling efforts in Newfoundland were minor because of the lack of local markets and high transportation costs. However, with the increasing awareness of the environment and the opening of Nova Recycling, the Department of Environment and Lands began a pilot Waste Paper Recycling Program in July of 1989.

A Waste Paper Recycling Program Planning Committee was formed and it consists of provincial and federal government employees, as well as representatives from the recycling industry. It is the hope of this committee that Waste Paper Recycling Programs similar to the ones in Ontario become implemented in Newfoundland. It is planned that Phase I consist of waste paper recycling in the Confederation Building's East and West Blocks, and Phase II would consist of the implementation of a similar program in other government office buildings in St. John's. Also, departmental staff at Confederation Building, Elizabeth Towers and some regional offices, have implemented a voluntary recycling effort that will see 5 tonnes of paper and other wastes recycled over the next year.

ACTIVITIES

1989/90 proved to be a very busy year for this Division with duties involving the processing of referrals and detailed applications for developments such as waste disposal sites, farms, septic tank systems, and hydrocarbon storage systems, responding to 477 environmental emergencies such as oil leaks and other hazardous materials spills, and dealing with approximately 10,000 complaints and inquiries.

Particularly prominent inquiries during 1989/90 involved requests for information on hazardous waste disposal. There were also an increasing number of complaints surrounding the operation of livestock farms, sawmills, and fish plants.

In the area of satisfactory alternatives for waste disposal, progress was made with the operators of problem sawmills and fish plants. A review of guidelines for livestock operations was undertaken in conjunction with the Agriculture Branch of the Department of Forestry and Agriculture, with a view to creating an acceptable system to separate new livestock units from residential areas and to stop residential encroachment on established livestock farms.

During the year, 73 commercial and municipal waste management systems were issued Certificates of Approval. 218 Approvals were issued for hydrocarbon storage tank systems and 23 small sewage disposal systems were licensed. A total of 314 Approvals were issued for the year.

Hazardous Waste

The Environmental Investigations Division continued to work closely with Environment Canada and industry in Newfoundland throughout the year with respect to the phase-out of electrical equipment containing polychlorinated biphenyls. Of the 60 PCB storage sites in the province, 18 larger sites have been licensed and efforts will continue to license all the smaller ones. 7 PCB storage sites have been decommissioned.

Solid Waste Management

Over 90 percent of Newfoundland municipalities and other local jurisdictions held valid waste management system Certificates of Approval in 1989/90.

One of the goals of the Division is the reduction in the number of waste disposal sites required in the Province. A highlight in this area for 1989/90 was the centralization of waste disposal for the communities of Grand Falls, Bishop's Falls and Windsor. Similarly, a regional site has been established in the L'Anse aux Meadows area, a site for the Burin area is undergoing further review, and plans are continuing towards a regional site to serve the community of Botwood and area.

Efforts were made in proceeding to license all commercial, industrial, and private waste management systems throughout the province. By year's end, 93 percent of 132 such systems held valid licences.

Labrador Major Projects

The Environmental Investigations Division has been involved since 1986 with planning leading to Canada's first mobile PCB destruction facility project. Along with the Industrial Environmental Engineering Division, the Environmental Investigations Division has monitored the course of operation of the PCB incinerator which was contracted by the Department of National Defense, and in which some 3,500 tonnes of PCB wastes were destroyed at Goose Bay.

The Iron Ore Company of Canada has decided to construct a new PCB storage site in order to comply with The Storage of PCB Waste Regulations.

Churchill Falls Power Corporation completed the removal of all active PCB transformers and placed them in storage at their approved storage site.

300 cubic meters of PCB contaminated soil have been removed from Cartwright.

The Labrador Regional Office monitored the construction of two military radar installations at Saglek and Cartwright.

Prosecutions

This year saw increased enforcement efforts by the Environmental Investigations Division, against both individuals and companies responsible for serious environmental abuses and neglect of legislation. The Enforcement Section of the Environmental

Investigations Division was extremely busy this past year as the public concern with environmental issues continues to increase, resulting in more reports of improper environmental activities being received by the Department.

The Enforcement Section continued its efforts in enforcement of The Waste Material (Disposal) Act. This included the issuance of Ministerial Orders, Warning Letters and Littering Notifications to persons who had waste on their property or who illegally disposed of waste material. A total of thirty-nine prosecutions were undertaken against individuals and companies who violated The Waste Material (Disposal) Act resulting in fines ranging from $50.00 to $300.00.

Additionally, the Enforcement Section continued to provide assistance under The Small Claims Act to Waste Disposal Committees in the province, to collect outstanding waste disposal fees.

Prosecutions under The Storage and Handling of Gasoline and Associated Products Regulations were undertaken against a number of firms in the province. Fines ranging from $1,500.00 to $2,000.00 were imposed against companies who failed to abide by The Regulations which govern the installation and operation of hydrocarbon storage systems in the province.

A number of individuals and companies were also successfully prosecuted for violations of The Department of Environment and Lands Act. Fines ranging from $25.00 for fishing in a watershed to $4000.00 for installing works without the required Certificate of Approval were imposed by provincial courts in the province.

Computerization

This year saw the development of a Prosecutions Database System which maintains information on Prosecutions under Environmental Legislation. This database has been sent to the other Atlantic Region Environment Departments in an increasing information exchange on environmental enforcement matters.

Referral

Throughout the year, the Environmental Investigations Division received many referrals from agencies such as federal, provincial, and municipal departments. The numbers of such referrals handled by our Regional Offices for 1989/90 are as follows:

REFERRALS	
Eastern Regional Office	400
Clarenville Regional Office	152
Central Regional Office	280
Western Regional Office	204
Labrador Regional Office	60
TOTAL	1,096

CIVIL/SANITARY ENVIRONMENTAL ENGINEERING DIVISION

Kenneth Dominie - Director

INTRODUCTION

The Civil/Sanitary Environmental Engineering Division is charged with the responsibility of ensuring that all municipal infrastructure systems are designed, constructed and operated in accordance with Departmental legislation and proper environmental practices. The Division also collects and assembles information on sanitary conditions in incorporated and unincorporated communities for input into the Provincial Municipal Capital Works Program. In addition to this main focus, the Division also provides technical assistance to other Divisions of the Department on matters relating to on-site sewage disposal, solid waste disposal systems construction and operation, and heavy civil engineering works.

The Division's authority to carry out its mandate is derived from the Department of Environment and Lands Act, Sections 23 and 24, and the Water and Sewer Regulations promulgated under that Act.

The Division currently has 7 staff, 5 of which are located at headquarters in St. John's and one each in the Regional offices at Grand Falls and Corner Brook. For the most part the staff are sanitary engineering oriented with the exception being the Training Coordinator, which combines engineering and educational skills. The permanent staff are supplemented by student assistance as necessary.

PROGRAMS AND SERVICES

Project Assessment and Inspection

Sections 23 and 24 of the Department of Environment and Lands Act require that the Minister approve any water and sewer projects before they are undertaken. During 1989/90, some 160 such approvals were recommended for approval to the Minister. For the most part, these systems were sponsored by municipalities through the Department of Municipal and Provincial Affairs. However, some came directly from municipalities and unincorporated areas as a result of funding assistance received through Federal employment

programs. This latter group of projects is somewhat more difficult to deal with than the former as the funding arrangement for them does not allow for any significant engineering input. The above approvals do not include on-site sewage disposal systems for which direct input was given to other Divisions.

Installation of Water and Sewer System

In order to provide detailed information on the relative priorities of the applications received from municipalities by the Department of Municipal and Provincial Affairs, Divisional field staff are constantly updating their records on sanitary conditions in various communities. During 1989/90, sanitary surveys were carried out in this regard in part or whole in the following communities:

* Cape St. George
* Musgrave Harbour
* Nain
* Twillingate

With the Division becoming more visible in the field, the number of requests for such surveys is increasing annually.

Once projects have been approved and are under construction, follow-up inspections are made at the job-site to ensure that projects are proceeding in accordance with Departmental approval and proper environmental construction practices. However, due to insufficient field staff, these inspections have not been carried out as frequently as is necessary to ensure proper compliance.

Sewage Treatment Plant Monitoring and Inspection

Currently, there are approximately 85 sewage treatment plants in the Province serving a variety of installations such as municipalities, schools, service stations and camping parks.

It is the Division's policy to inspect each sewage treatment plant in the Province at least three times a year and to sample the influent and effluent on at least one of these visits. While the lack of manpower has prohibited this schedule from being met, the Division is generally aware of operating conditions of all plants.

During the inspections, it has been observed that many plants, particularly the ones serving municipalities, are aging and replacement parts are sometimes difficult to obtain and also that operator attention is still lacking at most facilities. It is recommended that future installations utilize systems and technology which do not present major operating problems for the rural communities in which they are placed.

One interesting project undertaken in the field of sewage treatment in the Province recently is the replacement of the aging Beaverwood Plant in Gander with a new physical-chemical process using a technique known as hydrodynamic separation. This technology was proposed as an alternative to conventional technology in order to handle the wide range of quantity and quality of sewage to be treated. The plant's performance is being assessed to determine its applicability to other sites in the Province.

Water Quality Monitoring

Water quality monitoring programs are generally undertaken annually to assess the impact of urbanization on water bodies. In 1989/90, sampling was concentrated mainly on

Spaniard's Bay harbour to assess the impact of a newly constructed diffused marine outfall on harbour water quality. This outfall was installed to replace an existing sewage treatment plant which was giving the Town some problems and was installed on a temporary basis pending the outcome of the monitoring program. The sampling in 1989/90 concluded two years of field work which has now been assembled into a final report for the Department's consideration.

Operator Training

The operator training program continues to progress with new course material being developed and delivered. During 1989/90, 14 training sessions were held with 165 persons in attendance. Some of the topics covered during these sessions were:

* Sewage Treatment

  (a) Basic - Level I
  (b) Intermediate - Level II
  (c) Specialized - Rotating Biological Contractor

* Cross - Connection Control

* Water Quality Control

* Hydrant Maintenance

Also during the year, new manuals were produced on Chlorination of Potable Water Supplies and Hydrant Maintenance. A manual is under production on Pipeline Maintenance and Water Quality Control. The Division continues to be represented on the Atlantic Canada Voluntary Certification Board for Operators. Information on this program has been distributed to municipal operators throughout the Province and several have applied for certification. The number of operators applying for certification is expected to increase once the certification information is spread formally and by word of mouth amongst operators.

ACTIVITIES

Committees

During the course of delivery of the programs and services of the Division as previously outlined, various staff members have been assigned to committees and working groups to make that delivery more efficient. Some of these committees are:

* Technical Advisory Committee (TAC) to the Minister of Municipal & Provincial Affairs
* Grand Falls Water System Technical Committee
* Port aux Basques Water System Technical Committee
* National Committee of Operator Training, Education & Certification
* Atlantic Canada Voluntary Certification Board
* Municipal Capital Projects Board
* Environmental Sub-Committee for Coastal Labrador Comprehensive Agreement
* Environmental Surveillance Committee
* Environmental Assessment Committees as required

Water Quality Data Base

During 1989/90, information on water quality in municipal supplies was retrieved from files and reports and assembled into a common data base. This information provides a broad perspective on municipal water quality as it compares to the requirements of the Canadian Drinking Water Guidelines and identifies gaps in information which if available would make an assessment of overall water quality more complete.

SPECIAL ASSIGNMENTS

During 1989/90, the Division became involved in several activities which fell outside the routine activities of the Division.

3rd National Conference on Drinking Water

Although this conference was held in 1988, it is felt worthy of note in this Annual Report. The Conference was Co-sponsored and Chaired by the Department and was held in St. John's from June 12-14, 1988. The theme of the Conference was "Small Systems Alternatives" which is quite appropriate for the Newfoundland and Labrador setting where many of the residents reside in small rural communities. Proceedings of the Conference have been published.

Federal/Provincial Sub-Committee on Drinking Water

The Division represents the Province through the Department of Health on the Federal/Provincial Sub-Committee on Drinking Water. The Committee is charged with the responsibility of setting guidelines for physical, chemical and bacteriological characteristics of drinking water. The committee reports to the Federal/Provincial Committee on Occupational and Environmental Health and meets approximately twice per year.

Steering Committee on Coastal Labrador Housing

The Division chaired a steering committee of officials from the Departments of Health, Municipal and Provincial Affairs, Environment and Lands and Newfoundland and Labrador Housing Corporation to address problems with the delivery of housing programs in Coastal Labrador. A report on the matter was submitted to the Minister of Health in May, 1989.

Committee on Alternative Servicing Techniques

The rising cost of providing water and sewer services to the many rural communities in the Province has prompted government to establish a committee to investigate alternative means of doing so. The Committee is comprised of officials from the Departments of

Municipal and Provincial Affairs, Health and Environment & Lands. Work has just gotten under way on this project with the first steps being conducting a literature search and contacting other Canadian jurisdictions.

STAFF DEVELOPMENT AND TRAINING

Throughout the year, staff of the Division attended various technical seminars and courses in the areas of water treatment, sewage treatment and solid waste disposal in an effort to keep abreast of techniques which may have application to this Province. In addition, staff travelled to other Provinces to discuss specific systems with those having experience with them in order to assess in detail the requirements for approval of those systems in this Province.

In addition to the technical training, staff meetings were also held to discuss policies and principles of operation for Divisional activities.

FUTURE GOALS/OBJECTIVES/TRENDS

In order to address the many problems and concerns that will face the Division in the near future, it is felt that several initiatives are necessary:

* Develop new and expand upon existing databases on drinking water quality, impacts of urbanization on surface and groundwater, levels of services available in communities, and sanitary conditions in communities.

* Develop a strong association with operators of municipal water and sewer systems so as environmental concerns become a part of every day operations.

* Develop a long term strategic plan for domestic sewage disposal for the province.

THE INDUSTRIAL ENVIRONMENTAL ENGINEERING DIVISION

Derrick Maddocks - Director

INTRODUCTION

The Industrial Environmental Engineering Division has five main mandates:

1. The Division is responsible for monitoring, negotiating and enforcing compliance with provincial regulations by all industry. The Division also drafts guidelines, codes of practice and legislation to minimize environmental damage by industry. Present staffing is two Senior Engineers and three Engineer II's.

2. The Division fulfils the Province's commitments under the Canada/Newfoundland Agreement Respecting a Sulphur Dioxide Reduction Program and subsidiary agreements. This is accomplished by a continuing program to monitor acid rain, by negotiating and working with industry to reduce fuel consumption and the sulphur content of fuels, by maintaining an inventory of SO_2 emissions and by liaising with the federal and other provincial governments. Present staffing is one Environmental Laboratory Chemist.

3. The Division conducts air, water and soil quality monitoring. Programs have been carried out to monitor specific industrial pollution as well as general community pollution and background pollutant levels. Monitoring has often been conducted in co-operation with Environment Canada. Present staffing is one Environmental Monitoring Specialist and one Technician who also assists the Environmental Laboratory Chemist.

4. The Division provides expert knowledge to the Department, other Departments and the public pertaining to chemistry, hazardous chemicals and wastes. Present staffing is one Environmental Chemist who also supervises the Environmental Laboratory Chemist, Environmental Monitoring Specialist, and a Technician.

5. The Division liaises with other environmental agencies, and is this Province's contact point concerning fuel regulations, industrial effluent regulations, toxic substances, air quality and various atmospheric environmental concerns, e.g. LRTAP, acid rain, NOx and VOCs, CFCs, climate change and energy conservation.

Additional staff includes the Director, one Statistician and one Clerk-Stenographer.

The Division's authority to carry out its mandate includes the enforcement of An Act Respecting The Department of Environment and Lands, The Environmental Control (Water and Sewage) Regulations, 1980, and The Air Pollution Control Regulations, 1981. In addition, the Division is responsible for the enforcement of The Storage and Handling of Gasoline and Associated Products Regulations, 1982, and The Enforcement of The Prevention of Misfueling of Light Duty Vehicle Regulations, 1986.

PROGRAMS AND SERVICES

The Division has two main programs: compliance and monitoring. In fulfilling these mandates, the Division attended, over a three month period, 37 meetings with industry and the public.

Compliance

Pulp and Paper

The Division worked closely with Corner Brook Pulp and Paper to ensure adherence to the terms of the Compliance Agreement. Due to unforeseen circumstances, this agreement was renegotiated in early 1989/90 and will, by 1992, see the installation of a new state-of-the-art bark boiler.

Progress continued towards completing the conditions of the Environmental Agreement signed with Abitibi Price in Grand Falls. Completion of a new clarifier will see dramatic improvements made in the water effluent being discharged to the Exploits River.

Work continued at Abitibi Price in Stephenville aimed at bringing the aeration lagoon system into proper working order by September, 1990.

The Division participated in the development of the new Pulp and Paper Effluent Regulations by Environment Canada and will work closely with them on their enforcement.

Mining

The Hope Brook Gold Mine experienced insurmountable problems with its effluent treatment plant immediately upon start-up of their gold mill. The Division worked closely with the company to evaluate the situation, to mitigate the problems, and to develop an acceptable alternative. The new effluent treatment system will be operational by October, 1990.

Negotiations have continued with the Iron Ore Company of Canada and Wabush Mines to develop effective tailings plans and revegetation programs as well as improved stack emission controls to reduce the dust problem in the two towns.

Development of an effective tailings impoundment area has been a priority at the St. Lawrence Fluorspar Mine. This is expected to be in place by September, 1990.

Monitoring of the closeout at Newfoundland Zinc and rehabilitation at the Buchans Ascaro operation are designed to ensure environmentally safe abandonment.

Close observation of new operations by Aurion Minerals and The Newfoundland Resources and Mining Company as well as Dolphin's Cape Ray gold project will ensure that these operations meet all required standards from day one.

Asphalt Plants

During the 1989 paving season, the Department issued thirty-nine Certificates of Approval for Asphalt Plant Operation.

Each prospective site was visited by Department personnel before an approval was issued (or refused). Although not all operating asphalt plants were visited, an effort was made to visit asphalt plants on a more regular basis to ensure compliance with the Certificate of Approval conditions and Department Regulations. As a result, there are now

more self-dyked fuel tanks in use and former plant sites are left in a clean condition. Operators and personnel of asphalt plants are now more conscious of the environment due to Department personnel becoming more visible in the field.

Once the paving season had come to an end, the procedure of issuing Certificates of Approval for asphalt plants was reviewed along with the Environmental Code of Practice for Asphalt Plants, initially developed in 1988. A new application form was created and the Code of Practice was revised to incorporate positive changes in reducing the risk of asphalt plant operation on the environment.

Fishmeal Plants

In 1989, twelve fishmeal plants operated in the province, and although resources didn't allow all the plants to be visited, progress was made to bring the plants into compliance with Departmental regulations. Plants on the Avalon and Burin Peninsulas had effluent samples taken and are consequently looking at process changes to lessen their impact on the environment.

In Carbonear, Division personnel were part of a committee set up to investigate and provide solutions to an odour problem associated with the town's fishmeal plant. Suggestions from the personnel involved led to the operator hiring a consultant to provide possible solutions to the odour problem as well as changes to effluent treatment.

Plans are to continue efforts in this area during 1990 by obtaining more samples from plants around the province and increasing the level of communication with fishmeal plant operators.

Other Industries

Albright & Wilson, Americas

During the past year, the Division has actively participated in the Environmental Assessment process which the company has become involved in as a result of their decision to close the plant in the summer of 1989. We have been responsible for implementing and maintaining a monitoring program of weekly visits to the plant to ensure that the plant is being maintained and that authorized decontamination activities are being carried out in an environmentally safe manner. We have also partaken in discussions with consultants and

other parties with possible interests in the plant, its infrastructure and its location might prove useful for other industrial endeavours.

Come By Chance Refinery (Newfoundland Processing)

The refinery has kept within compliance of the Department Regulations and Conditions of Certificates of Approval that have been issued. Monthly reports from sulphur dioxide monitors in the area have shown no evidence of high sulphur dioxide emissions. Effluent from the refinery's waste treatment has also been considered to be in compliance.

The engineered hazardous waste site was used with no incident, other than temporary loss of the surety bond which was due only to administration difficulties.

Hospital Emissions

At certain times during 1989, the Industrial Environmental Engineering Division (IEED) received complaints from various residents of Newfoundland about air emissions from hospital stacks. The majority of these complaints were from people residing near the St. Clare's Mercy Hospital and The Salvation Army Grace General Hospital.

Emission from Stack

As a result of these complaints, several contacts were made with the chief stationary engineer of each hospital to determine if emissions could be improved. It was found that the burning of Bunker C or No. 6 oil, as a fuel for the boilers, together with overcapacity, may be the cause of the complaints of fallout on cars and houses. A smaller boiler which is able to burn more efficiently, considering the required load, is to be installed at St. Clare's and should provide some relief to area residents.

Both hospitals operate incinerators which also contribute to the emissions. Each of these incinerators is of an era when combustion products may not have been a significant design criteria. The incinerators make a large contribution to visible emissions in the area.

Newfoundland and Labrador Hydro

The Division's primary involvement with Hydro during this year has been related to discussions concerning operational problems of an effluent treatment system at the thermal generating station in Holyrood. A consultant was retained to study the present system, characterize the effluent, and determine the necessary mode of treatment to ensure a non-polluting effluent. An engineering consultant will eventually be retained to design the physical plant which will be used to treat the effluent.

The Division has also been involved in discussions with Hydro with respect to the wood chip fired thermal generating plant situated at Roddickton on the Northern Peninsula. A number of other wood chip fired boilers are in use elsewhere in the Province, however, this is the first time that one is being used to generate electricity.

Statistics

During the three months that records were kept, the Division made 70 site inspections. This period (January to March) is normally a slow period for site visits.

Monitoring

Acid Rain

The provincial Acid Rain monitoring program has been expanded through the takeover of three sites previously managed by Environment Canada. Volunteers are the most important resource of this program. They operate samplers that open automatically

whenever precipitation is falling and collect a sample of all the precipitation that falls during the course of a week. Six monitoring sites are presently collecting precipitation year round. Samples from each site are analyzed by the Industrial Environmental Engineering Division and Environment Canada staff at Environment Canada's lab in St. John's. Recently, new equipment has been obtained and changes in siting and procedures are planned that will improve data quality.

Excess sulphate expressed as kilograms/hectare/year indicates the severity of acid deposition in a particular area. A target of 20 kg/ha/yr has been agreed upon for the protection of moderately sensitive areas. As most of Newfoundland is highly sensitive due to low buffering capacity of soil and underlying rock, a lower rate of deposition is desirable.

The table below shows the trend in sulphate deposition at three sites in Newfoundland. At two of the sites there is evidence of a decrease in deposition which may be a result of reductions in emissions in Central Canada and the United States.

YEAR	TERRA NOVA	BAY D'ESPOIR	CORMACK
1981	8.7		
1982	8.1		
1983	7.6	15.5	
1984	10.5	15.2	
1985	7.1	14.5	
1986	8.9	12.9	11.9
1987	9.3	12.2	9.9
1988		11.8	9.3

Stream sampling was carried out at forty sites on the island in order to detect trends in water chemistry indicating effects of acid precipitation. Resource restrictions forced the reduction of stream sampling from four times a year in 1988 to once a year during 1989.

Air Monitoring

The air monitoring programs conducted by the Division fall into three groups: industrial compliance monitoring, national programs, and special projects.

In several communities in the province, air quality is, or has the potential to be, degraded by industrial emissions. Routine ambient air monitoring is conducted in Labrador City, Corner Brook, Grand Falls and Long Harbour in order to monitor compliance with Air Pollution Control Regulations by local industries. Pollutants measured included suspended particulate (Labrador City), sulphur dioxide (Corner Brook and Grand Falls), fluoride (Long Harbour). Air quality reports for each of these communities are in preparation. Division staff has had ongoing discussions with industries in Labrador City, Wabush and Corner Brook; the three communities where exceedences of provincial standards were observed. In addition to monitoring conducted by the Division, the Iron Ore Company of Canada, Wabush Mines, Albright and Wilson Americas and Newfoundland Processing submit ambient air monitoring reports to the Division.

The Division participates in national air pollution monitoring programs by operating monitoring equipment at two locations in Newfoundland. In downtown St. John's, urban air quality is measured at a station of the National Air Pollution Surveillance Network (NAPS). During 1989, new instruments were installed at this station and sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone, suspended particulate and lead are now all measured at this station. Environment Canada publishes monthly and annual summaries of results from the entire NAPS network. At the St. John's station, ozone was the only pollutant to exceed limits set for acceptable air quality in 1989.

As a result of concern about the long range transport of ground level ozone and the damage it causes to crops, a rural monitoring station for this pollutant is operated at Cormack. Sporadic data recovery has so far limited the information available from this site. A joint Environment Canada/Newfoundland Department of Environment and Lands report is anticipated for 1990.

ACTIVITIES

Due to the high public profile that air pollution has, the Division has been as involved as possible in public education and awareness. Activities included:

* two auto emission clinics (Mount Pearl and Gander)
* six school talks on acid rain
* attendance at two Humber Environmental Action Group meetings
* attendance at monthly Corner Brook Environment Committee meetings
* initial discussions with Junior Forest Rangers on participation in an acid rain monitoring program
* participation in Corner Brook's Symposium on the Environment.

In addition, during the three months that records were kept, the Division directly responded to 59 requests for information from the public as well as at least as many that were directed through the Public Relations Specialist. The Division also investigated nine complaints from the public.

SPECIAL ASSIGNMENTS

Come By Chance Hazardous Waste Sites

Waste sites left by the previous operator of the Come By Chance Refinery are the responsibility of the Newfoundland and Labrador Government. A project that will result in the ultimate clean up and permanent storage of the waste is ongoing. In the past year, Nolan, Davis and Associates (the consultant hired in 1988) submitted a three volume report covering assessment of the three sites and an investigation into a final site for permanent storage. A draft of a second report was submitted in February, 1990, which will provide a detailed summary of the site investigation.

Once a final report is accepted on the detailed site investigation and funds become available, a final decision on remedial action will be made.

Goose Bay PCB Burn

Although this project has been in the discussion stages for several years, this Division's involvement has been at its peak this year. In conjunction with personnel from Environmental Investigations, divisional staff prepared the Mobile PCB Destruction Facility Regulations and subsequently issued the first permit in Canada for such a facility. The Division represented the Province, in Ottawa, when the final choice of a contractor for the project was made. Divisional staff have also been involved in monitoring of the project through participation in the daily inspections of incinerator operations as well as through the review of incident reports, and proposed ameliorative actions, which resulted from several unexpected emission episodes.

Air monitoring in the vicinity of the PCB incinerator and in the community was begun during 1989 and will be continued until the incinerator is removed. The project will provide data on levels of air pollutants in the community as well as monitor compliance of the incinerator with provincial regulations. Samples are collected and analyzed with extremely sensitive equipment capable of detecting trace amounts of PCBs, polychlorinated dibenzo-dioxins, polychlorinated dibenzo-furans, poly-aromatic hydrocarbons, and other organic compounds in ambient air. Total suspended particulate and metals are also being measured. Timely sampling has provided assurance that the two incidents that occurred at the incinerator did not lead to abnormal ambient air concentrations of these pollutants.

Corner Brook Air Study

This joint Environment Canada/Newfoundland Department of Environment and Lands project, initiated in the previous fiscal year, was continued in August, 1989, with intensive monitoring of airborne particulate at five sites. In addition to measuring total suspended particulate at all sites, the subfraction of particles small enough to lodge in the lungs was measured at three locations. Chemical analysis for both inorganic compounds and polyaromatic hydrocarbons is being carried out. The completion of data analysis of the results of this study will increase our knowledge of the levels, conditions, sources and health risks associated with particulate pollution in Corner Brook.

STAFF DEVELOPMENT AND TRAINING

Staff development and training continued through review of technical journals and papers. In addition, staff members attended the following conferences or courses:

* Applied Mineral Economics
* Dioxin 89 Conference
* Mine Reclamation Symposium
* Canadian Institute of Mining, Metallurgy and Petroleum
* Gold Mill Effluent Treatment Conference
* Demonstration of Remedial Action Technologies for Contaminated Land and Groundwater Conference

FUTURE GOALS/OBJECTIVES/TRENDS

With the ever-increasing interest in the environment, the obvious trend is towards greater involvement by this Division.

The Division expects to continue to press industry towards attaining compliance with regulations and will continue to work closely with Environment Canada especially in relation to the Pulp and Paper Effluent Regulations and the Metal Mining Liquid Effluent Regulations.

It is expected that the Division will increase its involvement in public awareness including presentations to schools and other groups and the fielding of requests for technical information. This will obviously lead to an increased monitoring effort.

The Division has recently assumed responsibility for several new areas including:

* NOx and VOCs Management Plan

* Management Plan for Substances that Deplete the Ozone Layer

* Climate Change and Energy Conservation which are high profile items and will demand increased attention.

WATER RESOURCES MANAGEMENT DIVISION

Dr. Wasi Ullah - Director

INTRODUCTION

The Water Resources Management Division is responsible for the administration of the water related mandate of the Department of Environment and Lands Act, Waters Protection Act and the Well Drilling Act and the Regulations under this Act. The responsibilities relate to allocation of water, approval of stream alteration works, protection of water supply areas, licensing of well drillers and other aspects of water resource management. In addition to regulatory responsibilities, the activities and programs of the Division include the operation and maintenance of hydrologic networks, hydrologic and environmental impact studies, flood risk mapping, flood forecasting, hydrologic data processing and application of hydrologic models, etc.

The activities and programs of the Division are developed and implemented by five Sections headed by senior professionals having expertise in respective areas. The approved positions in the Division consist of 10 professional, 10 technical and 2 secretarial staff. The field programs are assisted by students and part-time observers.

PROGRAM AND ACTIVITIES

Surface Water Section

Water Resource Assessment - Hydrologic Networks

The activities and programs under this Section are briefly outlined as follows.

Hydrometric Network

During the year, more than 90 stations were operated by the Water Survey of Canada under the Canada-Newfoundland Hydrometric Surveys Agreement signed in 1975. Twenty-five of these stations are equipped with data collection platforms for obtaining real-time data via a satellite. In addition, the province operated 7 hydrometric stations located on small watersheds not adequately covered under the Agreement.

An Agreement signed between the Province and the Deer Lake Power Company provided for the upgrading of some of the existing stations and construction of a few new hydrometric and climate stations in the Humber River system. This will help in making more reliable forecasts of water yield and flood flows.

Climatological Network

Eleven new stations were added to the provincial climatological network under the Canada-Newfoundland Climate Stations and Programs Agreement to bring the total to 67 (federal 36 - Provincial 31). The provincial share of the cost during 1989/90 was approximately $62,000.

Water Quality Network

The Canada-Newfoundland Water Quality Agreement was implemented in 1989/90 by three Water Quality Officers and one Water Quality Manager at a cost of about $359,000 to be shared on an approximate 60/40 basis. The Agreement currently generates monthly/bi-monthly data from 62 Index Stations and 36 Recurrent Stations. Eleven new stations were added during 1989/90 to the Index network. The Waterford River Recurrent Survey was conducted during the summer of 1989 to identify contaminants and their sources. Information on river basin characteristics continued to be collected under the program and compiled during the year. Data collected under the program are stored on readily accessible computer systems.

Protection of Water Supply Areas

More than 185 water supply areas have so far been designated under Section 26 of the Department of Environment and Lands Act. With the hiring of two Regional Watershed Quality Officers, activities such as monitoring of water quality, surveillance of designated areas, land use inventory, impact analysis, etc. have been initiated.

Hydrologic Impact Studies

A number of preliminary studies are in progress to assess the impacts of various resource based activities such as urbanization, logging, peat harvesting, cottage development, etc.

Regional Water Resources Studies

The regional water resources study of the Northern Peninsula and Humber Valley was completed by a consultant on contract from this department during 1989-90. The report analyzed the water supply and demand situations in the study area for various beneficial uses and made specific recommendations to meet future demand and to minimize water use conflict.

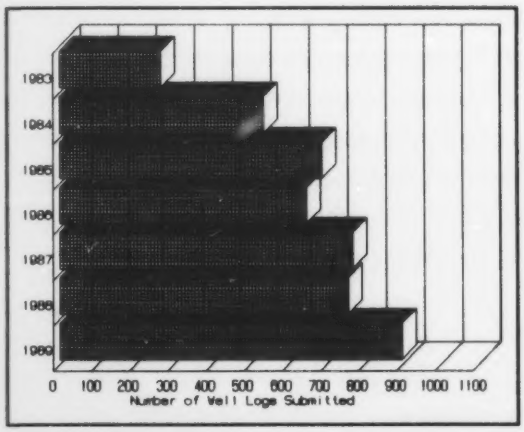
Groundwater Section

General

This Section, consisting of one senior hydrogeologist as Groundwater Resource Manager, one Water Well Inspector and a Water Resource Technician, is responsible for the administration of the Well Drilling Act and the Regulations under this Act in addition to the water related provisions of the Department of Environment and Lands Act.

Water Well Drilling

The number of well drillers in Newfoundland rose to 8 during the year and the number of well records submitted rose to a record of 896. Each of these records represents a valuable piece of information concerning our groundwater resource. So far, since the passing of the Well Drilling Act in 1983, the number of records submitted by the water well driller in the Province total more than 4,500. These data are entered into the Well Information Data Base which is available to Government and private agencies for better development and management of this precious resource.



Groundwater Studies/Protection

The third report in the new series of local groundwater studies was completed in the St. Alban's area. This series is designed to characterize the hydrogeology of communities that use groundwater as their sole source of water. As part of the study, groundwater protection zones are determined for the well field so that the resource is protected for future generations.

Effects of Road Salt on Groundwater

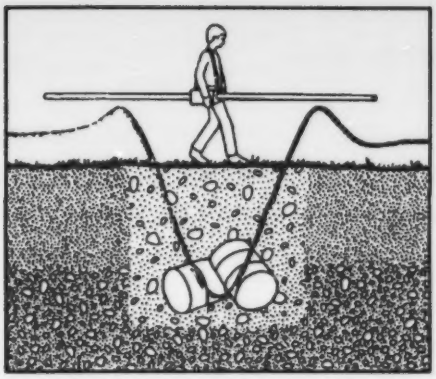
A new study was initiated to determine the effects of road salt on groundwater quality in the Province. This is becoming a serious problem in rural Newfoundland due to the large amount of deicing salt that is used here and the nature of our soils. Domestic wells are typically near the highway and the soil is coarse in texture. Even deep drilled wells constructed in bedrock are susceptible to such contamination since rock fractures can be near vertical in orientation. Thus the road side ditch may be quite well connected to the rock fracture system below the casing.

Landfill Monitoring

In the continuing effort to determine the effect of landfilling on groundwater, a controlled tracer test was conducted at the Terra Nova Landfill site. From this work, the in-situ permeability of the soils was determined. This, in turn, will be used in the computer model for the site.

Groundwater Investigations

In the year under review, the Section has responded to 102 requests pertaining to public and private concerns. These requests ranged from a need for well log information to detailed soil and groundwater investigation and sampling relating to suspected pollution.



Geonics Ground Conductivity Meter

The Groundwater Section has acquired an EM31 ground conductivity meter. This geophysical instrument is capable of measuring the average electrical conductivity of the ground to a depth of about 6 m. In addition to being able to detect buried drums or other metallic objects, the EM31 can detect the plume of contaminant in the groundwater that may be emanating from a landfill site or other source of pollution. Three surveys have already been conducted and each proved very useful.

Hydrologic Modelling Section

General

This Section is responsible for the development, application, and evaluation of techniques and methodologies, including hydrologic and hydraulic models, presently used for management of water resources, resolution of water related problems, and resource planning. The responsibility covers such areas as water systems analysis, hydrologic data analysis, computer modelling, and special projects and studies.

This Section consists of a Water Resources Engineer, a Professional Engineer, and an Electronic Data Processing Systems Officer who are assisted by staff of other Sections as and when required.

Hydrologic Data Analysis

A computer data base consisting of physiographic and extreme flow characteristics of 44 watersheds ranging in size from 3.9 km^2 to 4400 km^2 has been created.

A regional analysis of frequency of floods has been completed. A computer program for estimating peak flows using the results of the study has been released. Results of this analysis are extensively used by government departments, companies and consultants in the design of water control structures.

A study on the characteristics of low flows in rivers has been completed. Efforts are currently being made to develop a predictive model for low flows.

Two studies on the impacts of peat harvesting on water quantity and quality using long term data collected at Bishop's Falls and St. Shotts are nearing completion. Guidelines for the protection of water resources in peat land areas will ensue from the results.

Computer Modelling

Several hydrologic and hydraulic computer models have been transferred from mainframe to microcomputers. Computer data bases, developed by Environment Canada, on stream flows for all gauged rivers in the Province and on physical characteristics of approximately 50,000 lakes and ponds greater than 1 hectare in Newfoundland have been installed on microcomputers.

The Division has acquired a Geographic Information System and an Image Analysis System. The impacts of land use changes on water quantity and quality from selected watersheds will be studied using these systems.

The computer based system used to retrieve real-time stream flow data has been enhanced to access 33 data collection platforms (DCP). Several of these DCPs are now being equipped with additional sensors to collect precipitation and temperature data. The data from this system is used for flood forecasting in areas such as Badger and Steady Brook, reservoir regulation for hydropower generation by Abitibi-Price and Deer Lake Power, and is also being used by the Newfoundland and Labrador Canoeing Association.

Information Services

A Water Resources Newsletter, providing current information on river flows, reservoir levels, water quality, and river ice conditions, is published every month and distributed to over 90 governmental and non-governmental groups.

Water Investigations Section

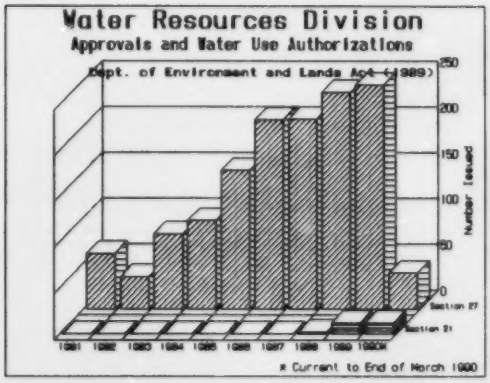
General

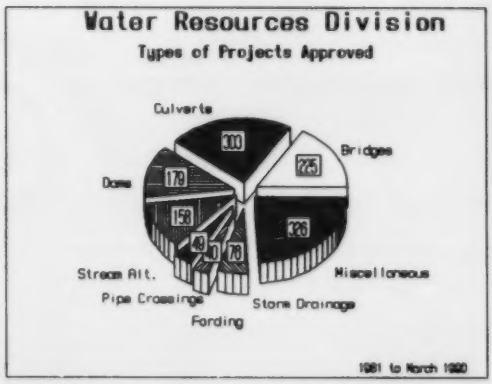
The Water Investigations Section is responsible for administering an approval process for all proposed alterations to provincial bodies of water, investigation of water related problems and complaints, providing technical services in the area of hydrological, hydraulic and environmental design of water related structures, undertaking studies of flooding, evaluating the impact of any kind of development on water resources and addressing dam safety issues.

The staff complement of the Section is comprised of a water resource management engineer who supervises a flood studies engineer, a project engineer, a water resources technician and temporary staff and students.

Environmental Approvals

The Section issued 250 Certificates of Environmental Approval for such projects as bridges (27), culverts (54), dams (21), stream alterations (8), pipe crossings (15), fording (19) and 91 other water related projects under Section 27 of the Department of Environment and Lands Act.





Investigations/Inspections

There were over a 100 investigations conducted on various water related problems and recommendation made to resolve them. This Section continued to provide information to the public at a rate of over 1,000 phone calls per year.

Canada-Newfoundland Flood Damage Reduction Program

Hydro-technical studies for Codroy Valley, Bishop's Falls, Cox's Cove, Parson's Pond, Terra Nova, and Glenwood/Appleton were completed, flood risk maps prepared and areas designated.

Monitoring of ice and flow conditions at Badger, Harry's River, Terra Nova and Humber River continued during the period under report for the purpose of flood forecasting.

Water Rights Section

General

The Water Rights Section is responsible for administering the allocation of water in the Province. The Section has one position of Water Resource Management Engineer which has been vacant since January 1990.

Water Use Authorizations

A water allocation system was developed as an interim arrangement for allocating water use pending approval of the draft Water Resources Act. The Section issued 24 water use authorizations in 1989/90 under Section 21 of the Department of Environment and Lands Act for various purposes especially aquaculture.

OTHER ACTIVITIES

In addition to the implementation of the above-mentioned programs and activities relating to the Division's mandate, the professional and technical staff were also involved in other activities listed as follows:

* participation on assessment and other committees
* assessment of referrals from other government departments and agencies
* review of technical reports
* preparation of technical/scientific papers for presentation/publication
* participation in seminars and speaking assignments on various aspects of water resources
* participation in environmental emergencies such as flooding, oil spills, etc.

SPECIAL ASSIGNMENTS

* A Bursary Program was established to train six graduate engineers (two/year) at a Canadian university during the next 4-5 years. No suitable candidate was available during the period under review
* Government approved a contribution of $250,000 to Rennies River Development Foundation towards the cost of the Freshwater Resource Centre. The first instalment of $50,000 was paid in 1989-90.
* The Community of Kippens was granted $10,000 for a river stabilization project.
* Substantial progress was made in the preparation of a Water Atlas for the province. Twenty-seven plates out of approximately 30 have so far been completed or are nearing completion.

STAFF DEVELOPMENT AND TRAINING

Staff attended academic courses, workshops, conferences and training sessions on dam safety, statistical methods in hydrology, hydrogeology, storm water management, design of harbour facilities, water resources engineering and computer technology.

FUTURE GOALS/OBJECTIVES/TRENDS

The prime goals of the Division continue to be the consolidation of existing water related legislation into a new Water Resources Act and the subsequent promulgation of water supply area protection regulations.

Increasing water use conflicts underscore the need to promote greater public awareness of the relationship between environmental protection requirement and the resolution of such issues.

Renewal of the Federal-Provincial Flood Damage Reduction Program to cover further unmapped flood prone communities is under consideration.

ENVIRONMENTAL ASSESSMENT DIVISION

David Taylor - Director

INTRODUCTION

The Environmental Assessment Division is made up of three sections: Environmental Assessment, Environmental Impact Management, and Pesticides Control. The Environmental Assessment Section administers the Environmental Assessment process and co-ordinates the preparation of Environmental Impact Statements in accordance with the Environmental Assessment Act (1980) and Regulations (1984). The Environmental Impact Management Section is charged with undertaking surveillance inspections and with coordinating the monitoring and rehabilitation programs of projects under environmental assessment. The Pesticides Control Section is responsible for the regulation of commercial and restricted class pesticides in accordance with the Pesticides Control Act (1983) and Regulations (1984).

The Environmental Assessment Division has eleven staff, who for the most part are trained in biology related disciplines. With the exception of one surveillance officer in Corner Brook, the staff is stationed in St. John's.

PROGRAMS AND SERVICES

Environmental Impact Assessment

The Environmental Assessment section administers the environmental assessment process. In 1989/90, 132 referrals were processed, leading to 40 registrations. Of the undertakings registered, three required the preparation of an Environmental Impact Statement (EIS), three required the preparation of an Environmental Preview Report (EPR), and 34 were released from further assessment.

One EIS and three EPR's were completed:

Berry Hill to Daniel's Harbour Station Transmission Line EIS.
(Proponent: Newfoundland and Labrador Hydro)

The EIS assessed the potential impacts resulting from installation of a 138kv, 86 km long transmission line on the west coast of Newfoundland. This project was examined by both the provincial and federal environmental assessment processes as about 31 km of the proposed route was within Gros Morne National Park. Potential impacts included: disturbance of suitable habitat for rare and endangered plant species, removal of 8.4 hectares of productive forest within the Portland Creek domestic wood cutting area, generation of electrical and magnetic fields and reduction of visual aesthetics. Newfoundland and Labrador Hydro committed to implement mitigations, to institute a compliance monitoring program, and to produce an Environmental Follow-up Report to discuss the effectiveness of environmental safety measures.

Long Pond Reservoir Raising Environmental Preview Report
(Proponent: Newfoundland and Labrador Hydro)

The Environmental Preview Report provided additional information on effects that may result from raising the level of Long Pond Reservoir (Bay D'Espoir system) by 1.5 metres for nine months out of each year. The following impacts were predicted to occur: loss of salmonoid habitat, increased access for salmonoids at four streams, loss of about 3,000 m^3 of harvestable fibre and contribution to existing aesthetic disturbance due to flooded standing timber.

Hydro has committed to monitor mercury levels in fish tissue to determine if these levels increase, and to monitor inundation of fish habitat in conjunction with the Department of Fisheries and Oceans "No Net Loss of Habitat" principle.

Labrador West (Leila Wynne Lake) Dolomite Quarry Environmental Preview Report
(Proponent: Iron Ore Company of Canada)

The Environmental Preview Report provided information on effects that may result from the construction of a 1KM access road and the operation of a dolomite quarry in the Labrador City - Wabush area. The quarry will be in operation from May to November each year for about 15 years. The impacts predicted to occur include siltation of fish habitat at

stream crossings, increase in noise levels, and wear of existing road infrastructure (Routes 500 and 530, Javelin Road) due to increased traffic.

The proponent committed to several mitigations to minimize impacts to historic resources, water quality, public safety, and damage to road infrastructure. The proponent also committed to prepare a rehabilitation plan for approval by the Impact Management Section.

Croque Harbour Calcium Carbonate Quarry Environmental Preview Report (Proponent: Aurion Minerals Limited)

The Environmental Preview Report provided information on effects that may result from the construction of docking faciiities, 4km of access road, and the operation of a calcium carbonate quarry near Croque and St. Julien's on the Great Northern Peninsula. The quarry will be contained within an area of about 150 hectares, with an expected life of 20 years. The impacts predicted to occur include: disturbance to local wildlife during construction and blasting, increase in dust due to quarry operation, increase of access and potentially hunting pressure due to construction of the road, and disruption to placement of fishing gear in Croque Harbour due to the projected passage of two ships per month.

Aurion Minerals Limited committed to implement mitigations, and to establish baseline water quality monitoring program. The proponent also committed to submit a rehabilitation plan to the Minister of Environment & Lands for approval.

All four of the above proposals were released from further assessment requirements and were allowed to proceed conditional on compliance with certain environmental criteria.

One exemption was issued for a proposed effluent tailings management system at the Hope Brook gold mine which would replace the ineffective hydrogen peroxide system. Pursuant to the exemption order, an Environmental Review Document was produced to assess the potential impacts resulting from the impoundment of the Pine Pond and the construction and operation of an "SO_2/Air" effluent treatment system. The impacts predicted to occur include: loss of fish habitat in Pine Pond, reduction of fish population downstream of Pine Pond dam, disturbance to wildlife during construction, loss of Pine Pond for local Brook trout fishery, improved quality of effluent being discharged to the environment, decreased risk to fisheries resources downstream of the effluent treatment system (Betty's

Pond, Cinq Cerf Bay), reduced toxicity risks to wildlife due to reduced contaminant levels within the effluent treatment system ponds and reduced risk to commercial fisheries within Cinq Cerf Bay.

Hope Brook Gold Inc. committed to continue programs to monitor water quality, rehabilitation of disturbed sites, and other components as outlined in the original EIS.

Ongoing environmental assessments include:

- Long Harbour Phosphorous Plant Decommissioning Environmental Impact Statement
- Penetanguishene Trunk Sewer Environmental Impact Statement
- Forestry Timber Management (Chouse Brook and Roddickton) Environmental Impact Statement (Inactive)
- Cape Ray (Isle aux Morts) Gold Mine Environmental Impact Statement
- Tally Pond - Duck Pond Mining Project Environmental Impact Statement
- Little Grand Lake Logging Environmental Impact Statement
- Island Pond Hydroelectric Development Environmental Impact Statement
- Granite Canal Hydroelectric Development Environmental Impact Statement
- Sheffield Lake Militia Training Area Environmental Impact Statement
- Conception Bay North By-pass Highway Environmental Preview Report
- St. Lawrence Shoal Cove Pond Fluorspar Tailings Disposal Environmental Preview Report
- Holyrood IV Thermal Generating Station Environmental Preview Report
- Freshwater River Finfish Farm Environmental Preview Report

- Sawyer Lake - Dyke Lake Mining Exploration Road Environmental Preview Report

- Brake's Cove Asphalt Plant Environmental Preview Report (Inactive)

- Nugget Pond Mineral Exploration Environmental Preview Report (Inactive)

- Prosser's Rock Boat Basin Environmental Preview Report

Environmental Surveillance

The Environmental Impact Management Section is responsible for coordinating, monitoring, surveillance and rehabilitation activities at construction sites and resource developments that are being examined through or have been released from the environmental assessment process.

During 1989-90 surveillance activities were conducted at the following developments:

- Paradise River Hydro Project

- Governor's Park Recreational Complex

- Roddickton to St. Anthony Transmission Line

- Ross Bay Junction to Churchill Falls Tote Road

- Isle aux Morts Mineral Exploration Access Road

- Hope Brook Gold Mine

- Berry Hill Station to Daniels Harbour Station Transmission Line.

- Cat Arm clean-up and Reservoir Enhancements

- Ebbegunbaeg Low Saddle Dyke

- Leila Wynn Lake Forest Harvesting
- Long Harbour Phosphorous Plant Decommissioning
- Little Grand Lake Forest Harvesting
- Upper Humber/Main River Forest Harvesting
- Croque Marble Quarry
- Nugget Pond Mineral Exploration Access Road

Pesticide Operations Licensing

The Pesticides Control Section is responsible for licensing pesticide applicators, vendors and operators. In 1989-90, 37 pesticide operators licenses, 135 pesticide applicator licences, and 12 pesticide vendor licenses were issued.

Pesticide Operations Compliance and Enforcement

The Pesticides Control Section conducted approximately 50 routine and non-routine inspections of facilities handling or storing pesticides, pesticide application operations, and other pesticide related activities.

ACTIVITIES

Environmental Evaluations

Evaluations were completed by the Environmental Impact Management Section for the following development projects.

- Paradise River Hydroelectric Development
- West Salmon Dam Gated Spillway
- Grandy Brook Substation to Hope Brook Mine Substation Transmission Line.

Research Projects

Pesticide residues in wild berries were examined by the Pesticides Control Section. Funding was approved for three additional research projects for the summer of 1990.

Pesticides Advisory Board

In previous years, the Board reviewed all operator licences and agreed to stipulations to be applied to each operation. Due to increasing numbers of operator license applications, the Board now restricts its discussions to policy and legislative matters. The Pesticide Control Section, effective in 1989, processed all operator licences by means of a referral mechanism involving other provincial and federal departments.

National Initiatives

The Pesticides Control Section actively participated in a number of programs aimed at improving pesticide regulation on a national level:

(a) Canadian Association of Pesticide Control Officials (CAPCO)

This organization met several times to discuss pesticide applicator training, pesticide research and regulatory affairs.

(b) Federal Pesticide Registration Review

As with CAPCO, this organization met several times with negotiations aimed at improving the federal registration of pesticide products for use in Canada.

SPECIAL ASSIGNMENTS

Mineral Exploration Inventory

The Environmental Impact Management Section completed an inventory and assessment of mineral exploration activities located throughout the island. The Section will continue to work to ensure that these activities are conducted in an environmentally responsible manner.

Pesticide Operations Training Program

The Pesticides Control Section has been developing a training program for all individuals involved in the sale of commercial or restricted pesticides. In cooperation with the Department of Forestry and Agriculture the Section is preparing to present the courses in conjunction with voluntary farmer pesticide safety courses.

FUTURE GOALS/OBJECTIVES/TRENDS

Environmental Assessment Section

The Environmental Assessment Act was introduced ten years ago. New issues have arisen and new assessment techniques have been developed to try to address them; a review of the environmental assessment process in terms of its applicability to different project types, its usefulness as a planning and decision-making tool, its effectiveness as a forum for members of the public to voice their concerns, and its degree of success in helping to minimize environmental impact is a long-term goal of the Section.

Pesticides Control Section

The Section will acquire the services of a Pesticide Applications Specialist in late 1990. Additional pesticide user training initiatives will be subsequently pursued. The contributions of the Specialist will also facilitate the development of monitoring programs.

CROWN LANDS DIVISION

John Power - Director

INTRODUCTION

"The mandate of the Crown Lands Division of the Department of Environment and Lands is to facilitate the orderly development and conservation of provincial lands for the continuous social and economic benefit of Newfoundland.

The Division is entrusted to: make land available for industry, settlement, recreational and conservation needs; prevent unauthorized use; secure and guarantee Crown land title; plan the wisest use of land; and provide geographic information services."

To accomplish this mandate, The Lands Division operates under the Crown Lands Act. This legislation provides the basis for the issuance of Crown titles, Land management and enforcement.

The Division consists of a staff of 63 divided into 5 components. One of these components, Regional Services, consists of 4 Regional Offices located in St. John's, Gander, Corner Brook, and Happy Valley, Goose Bay. The regional offices are tasked with processing applications for Crown Lands, public information services, field inspections, enforcement of the Crown Lands Act and the implementation of Lands Branch policies. A total staff of 41 work with regional services.

The three other components of the Division are located in the Howley Building in St. John's. The Registry and Records Office with a staff of 11 is the repository for the province of all Crown titles and records pertaining to Crown land. The Lands Titles office with a staff of 12 is mandated to prepare all Crown titles and to update and maintain the provincial cadastral (land ownership) mapping data base. The Cadastral Mapping Section with a staff of 4 is mandated to produce the cadastral map base as they are placed in the map collection. The Air Photo and Map Library with a staff of 5 is the repository of the Provincial Base Map and Air Photo Collections. In addition, the Administrative, accounting and Geographic Names Board are attached to this Section.

PROGRAMS AND SERVICES

As a reflection of the mandate statement, the programs of the Division are oriented towards providing service to the general public, industry and the three levels of Government.

The programs of the Division are as follows:

Allocation of Crown Land

The major function of the Crown Lands Division is the allocation of Crown Lands for any use that is not environmentally unsafe or incompatible to adjoining land uses. The Regional Offices, Land Titles Office and Registry Office devote the majority of their time to the processing of applications.

Crown Records

There is an ongoing program in place to upgrade the storage and retrieval systems for Crown Lands Records. In the past year, new map and file storage units have been added for the improvement of the physical storage as well as the completion of the transfer of historical data onto the Computerised Index.

Cadastral Mapping

To add to the cadastral base map collection, the Cadastral Mapping Section is compiling a land ownership map to strengthen the data available concerning land that has been allocated by the Crown.

Airphoto and Map Library

The Library retails maps and air photos to the general public, industry and the three levels of government.

ACTIVITIES

Land Legislation and Policy

The new Lands Act has received first reading in the House of Assembly following which the draft was submitted to the Legislative Review Committee for consideration.

Automation

The Crown Lands Application Processing System is a system that by nature requires a considerable amount of paper to support the processing for a given application. Over the past 10 years, the demands for land inquiries from the public have increased to the point where the Lands Branch is finding it increasingly more difficult to provide the same level of service that was intended 15 years ago when the regional offices were first set up. Because of these problems, it has been decided to computerize.

The proposed Application Tracking System (ATS) will allow instant tracking of applications from registration to issuance of title.

The software prototype is presently under evaluation with the development schedule to be completed in early Fall, 1990. At that time, the Howley Building offices are scheduled to be brought on line. The regional offices are scheduled to come on line in November, 1990.

Federal/Provincial Agreements

Aside from the normal federal/provincial land transfers and exchanges, there are two major initiatives that are ongoing. These relate to: (1) public harbours and (2) reversion of abandoned railway lands.

1. **Public Harbours**

   Under the terms of union with Canada, ownership of all public harbours was transferred to the Federal Government. Public Harbours were not defined in the terms of union and, consequently, there is a great deal of uncertainty over ownership.

Negotiations are under way to determine which Newfoundland harbours will be deemed to be public harbours under Federal control.

2. **Reversion of Railway Lands**

With the shut down of the Newfoundland Railway in September, 1988, the Crown Lands Division has been given the mandate to oversee the integration of the railway lands into the Provincial Land Base. This process is ongoing and is expected to continue for approximately two years.

STAFF DEVELOPMENT AND TRAINING

The major focus of staff development and training has been on in-house training. During the year, 5 specific training seminars were held:

1. **Lands Officer's Seminar**

2 day seminar held in Gander in October, 1989, attended by Lands Officers.

2. **Enforcement Seminar**

3 day seminar held in St. John's in November, 1989, attended by divisional staff involved in enforcement.

3. **Land Use Technicians**

2 day seminar held in St. John's in November, 1989, attended by Land Use Technicians.

4. **Survey Inspector**

1 day meeting held in St. John's in February, 1990

5. **Managers- Supervisor Workshop**

2 day seminar held in St. John's in February, 1990.

The courses available through the Public Service Commission have been used extensively by many individuals for personalized upgrading.

FUTURE GOALS/OBJECTIVES/TRENDS

A conscious effort is being made to be more customer-service oriented. Also, we are striving to remove barriers to all reasonable ideas that will lead to economic opportunities.

LAND MANAGEMENT DIVISION

Robert Warren - Director

INTRODUCTION

The Land Management Division was reorganized in 1989 in order to revitalize existing planning procedures and introduce new land management initiatives with the following objectives:

1. Reduce the length of time to respond to demands for land.

2. Create new employment opportunities in the private sector as a result of making land available to private developers.

3. Recover and reallocate lands currently idle, abandoned or unimproved.

4. Eliminate duplication between departments and streamline existing procedures.

5. Avoid and resolve conflicts between competing areas and uses of Crown Land.

6. Provide plans, policies and programs that will result in better and wiser uses of the Province's Crown land resource.

In accomplishing its mandate, the Land Management Division operates under The Crown Lands Act.

The division consists of a staff of 6 employees and the reorganization has resulted in the development of two functional units: Resource Planning and Policy Integration and Land Planning and Allocation, each with their own discreet areas of responsibility.

Resource Evaluation and Policy Integration Unit

This unit is responsible for ensuring all government land use and resource management proposals are properly integrated, conflicting and competing uses reconciled, and procedures streamlined to prevent duplication.

Land Planning and Allocation Unit

This unit is devoted to preparing proactive plans aimed at making the best and wisest use of Crown land. The Unit is also responsible for undertaking land development schemes to offset the demand for cottage and residential lots.

PROGRAMS AND SERVICES

Land Development

A variety of development projects were initiated in order to meet growing demands for residential and cottage lots. Three residential subdivisions were planned: Green Island Cove (15 lots), Musgravetown (15 lots) and Markland (4 lots). Roads and lot surveys will be completed in 1990. Two cottage subdivisions were planned and development undertaken: Indian Arm Pond (27 lots) and Thorburn Lake (31 lots). Lots within these subdivisions will be awarded by public draw in 1990.

Land Planning

Planning projects are best summarized as follows:

1. **Butts Pond/Middle Brook Integrated Land Use Plan**

   This plan serves to integrate the natural resource potential of the plan area in such a way that demands for agriculture, construction aggregates, and recreational cottages can be satisfied without conflict.

2. **Northwest Institutional Campground Reserve**

   This plan designates Northwest Pond as an exclusive area for campground development for such groups as the Boy Scouts and Girl Guides.

3. **Labrador Tote Road**

   Reconnaissance work was completed as a preliminary to the preparation of an integrated resource plan for the final link in the Trans Labrador Highway, known as the Ross Bay-Churchill Falls Tote Road. This plan is being completed for the

Department of Works Services and Transportation as part of their obligation under the Environmental Assessment Process. The final plan will be completed in 1990.

Interdepartmental Land Use Committee (ILUC)

This committee completed its sixth year with the continued high degree of interdepartmental cooperation. A total of 208 government projects were reviewed involving such things as silviculture, water supply protection, and cottage development projects. The following table provide information on the projects reviewed during the year.

ILUC PROJECT STATISTICS	
TYPE OF PROJECT	**NUMBER**
Municipal Plan Review	8
Agriculture Road	5
Cottage Development	5
Management Plan	1
Municipal Plan	9
Residential Development	1
Reserves	4
Waste Disposal Site	2
Other	3
Zoning Plan	2
Development Plan	2
Protected Water Supply	15
Silviculture	63
Forest Road	88
TOTAL	208

Policy

Following is a summary of major policies developed during the year:

1. **Aquaculture**

In consultation with the Department of Fisheries, a land disposition policy was developed to deal with the new growth in aquaculture in the Province. This policy has as its cornerstone a "one-stop shopping" procedure which eliminates confusion on the part of the applicant and serves to prevent uncoordinated and potentially conflicting recommendations from a multitude of agencies involved with aquaculture development. The major features of the disposition aspect of the policy are as follows:

Tenure:

(a) 15 year lease for commercial use
(b) 1 to 5 year licence to occupy for research and/or experimental use

Rental:

(a) $12/ha for commercial use
(b) $4/ha for non-commercial use

Special Development Conditions:

(a) title cannot be assigned or sublet without prior approval of the Lands Branch
(b) titleholder must possess an aquaculture licence in good standing at all times
(c) title may be cancelled if inoperative for a period in excess of 3 years

2. Commercial Outfitting

The Lands Branch completed a major policy governing outfitting in the Province. This policy followed a lengthy public consultation. This policy provides a greater balance between the needs of the outfitter to secure and protect his investment and the rights and privileges of the general public to share the Province's fish and game resources. Major features of the policy are as follows:

(a) Long term (50 year) leases are available to outfitters.
(b) Outfitters must meet vigorous high standards or lose title to the land.
(c) Private cottages on Crown land will not be permitted in areas that may conflict with the viability of licensed outfitting operations.
(d) Sensitive fish and game habitat will be off limits to lodge and private cottage development.

SPECIAL ASSIGNMENTS

Integrated Resource Planning

The Land Management Division joined forces with the federal government to host a 2 day workshop to discuss the development and implementation of a framework for integrated resource planning (IRP). The workshop was organized into plenary and discussion sessions with the overall objective of reaching consensus on developing an institutional framework for IRP in Newfoundland.

FUTURE GOALS/OBJECTIVES/TRENDS

A more integrated approach to the management of our resources is necessary if we are to achieve sustainable development. More comprehensive strategic planning is required. The task of setting the direction for integrated resource planning has fallen on the Executive Committee for Sustainable Development which is chaired by the Deputy Minister of Environment and Lands. It is expected that the committee will report to Cabinet on this matter in the near future.

SURVEYS AND MAPPING DIVISION

Neil MacNaughton - Director

INTRODUCTION

The Surveys and Mapping Division administers programs in geodetic surveys, topographic base mapping and aerial photography. The Division provides development in land tenure information systems and assists other Departments and Agencies in the design and implementation of surveys and mapping projects.

The Division has a permanent staff complement of 12 employees in the Geodetic and Legal Surveys, Topographic Mapping and Aerial Photography Sections, which together with the Support Section, assist in fulfilling the mandate of the Division.

The legislative authority for the Division is contained in Section 6 of The Department of Environment and Lands Act, 1989.

PROGRAMS AND SERVICES

Geodetic Surveys

The Division establishes and maintains a network of permanent survey markers primarily in developed areas as reference points for property surveys and topographic mapping. In 1989/90, 185 new stations were established in northeast Newfoundland and 270 stations were inspected on the Burin Peninsula.

Since 1963, there have been 5,740 survey markers installed in the Newfoundland Geodetic Network and it is estimated that 1,000 additional markers are required to provide adequate coverage.

It is estimated that the survey marker loss rate is 3.5 percent per year, and therefore, approximately 200 replacement markers are required per year to maintain the current number.

In 1989/90, forty-eight (48) photo control points were surveyed in support of the Topographic Mapping Program.

The Geodetic and Photo Control work was done by six (6) contracts at a total cost of $136,500.

Community Mapping

Large scale base maps at 1:2,500 and 1:5,000 scales are produced for communities and developed areas. The maps are compiled from aerial photographs and contours are plotted on most of the community maps. The aero-triangulation process which relates the air photos to the geodetic system is done "in-house." The aerial photography and compilation are contracted to Newfoundland companies.

Since 1968, 3,500 map sheets have been produced and approximately 1,000 additional map sheets are needed to complete initial map coverage of all communities.

In 1989/90, 105 map sheets at 1:2,500 scale and sixteen (16) map sheets at 1:5,000 scale were produced.

There was one photography contract ($15,000) and four map compilation contracts ($119,000).

Resource Mapping

Newfoundland resource managers have requested digital base maps derived from the Federal National Topographical Series at 1:50,000 scale. A digital file for one map sheet was produced in cooperation with the Federal Government in 1989/90. This work should continue in the following four years under the Geographical Information Technology Development Program (GITDP). The digital files from the 1:50,000 scale maps will provide reference base maps overlays in Geographical Information Systems (GIS) at larger scales of 1:20,000 or even 1:10,000, provided that the end user has an appreciation of the data source.

Air Photography Services

The air photo laboratory provides a complete service in development, contact printing and enlarging of aerial photography and contact printing of large format map sheets.

The air photo laboratory provides service to all departments of government and the general public. The total value of service provided in 1989/90 is $339,700.

The Division also provides assistance to other government departments in the procurement of aerial photography and the inspection of new photography. In 1989/90 approximately 6,400 frames of new photography was flown for base mapping, forest inventory and farm inventory.

OTHER ACTIVITIES

Legal Surveys

The Division provides consultation in the preparation of specifications and inspection of legal survey contracts. In 1989/90, the Division initiated assistance to the Pippy Park Commission in the survey of thirteen (13) km of its boundary. The Division also assisted the Land Management Division in the survey of eighty-four (84) cottage lots in three (3) development areas.

Redefinition

The Division is continuing work to prepare the Newfoundland geodetic survey data for readjustment on the 1983 redefined North American datum. Adoption of the NAD 83 datum by the Federal Government is expected in 1990 and the Newfoundland readjustment should be completed within two (2) years.

SPECIAL ASSIGNMENTS

Surveys and Mapping Study

In November, 1989, a consultants' study on Land Surveying, Mapping and Geographical Information Systems in Newfoundland was completed which identified the long

term surveying and mapping needs for the province and documented a five year program to complete the geodetic network, base mapping and implement a property mapping program.

GIS Functional Requirements Study

A small study was completed in March, 1990, to review and document the functional requirements for a Geographic Information System for the Surveys and Mapping Division.

Book of Maps for Newfoundland

A book of maps at 1:250,000 scale for the Island of Newfoundland was prepared and is ready for printing in 1990/91. The book is a reprint of the Federal 1:250,000 topographic maps in a fifty (50) map sheet 11" x 14" format. The book features a rescribed transportation network with forest access roads, a five (5) minute latitude-longitude graticule and a 1,000 place name gazetteer.

STAFF DEVELOPMENT AND TRAINING

CARIS Training

The Division conducted two "in-house, hands-on" five-day training courses on the CARIS GIS software. These training courses were presented by employees of Universal Systems Ltd. and were attended by a number of employees within the Division.

A number of employees toured some CARIS installations and property mapping operations in Halifax in February, 1990.

GIS Conference - Ottawa

The National Conference on Geographic Information Systems sponsored by the Canadian Institute of Surveying and Mapping was also attended by a number of employees in February, 1990.

FUTURE GOALS/OBJECTIVES/TRENDS

Geographical Information Technology Transfer Program

Federal/Provincial work shared projects are anticipated to produce digital map files for the 1:50,000 NTS map sheets covering the Island of Newfoundland. In 1990/91, we anticipate that $80,000 of contract work should produce digital files for twenty (20) map sheets.

Large Scale Digital Mapping

The Division will begin work to develop standards for the compilation of large scale maps (1:2,500 and 1:5,000 scales) in digital format. The Division will likely model these standards from the Federal Government and Province of Ontario standards.

Property Mapping Program

The Division will continue to develop standards and procedures to initiate a province-wide property index mapping program. The proposed data base will be built on a GIS with the property overlay in vector format and the base maps in raster format. Utilization of cheap raster images of the base maps will make province-wide input of data from the deeds registry feasible at the beginning of the program.

Wall Maps of Newfoundland and Labrador

The Division will produce wall maps of Labrador and Newfoundland at 1:1,500,000 scale and a wall map of Labrador at 1:1,000,000 scale. The work will be funded under the Labrador Development Agreement.

Cost Shared Program in Surveying and Mapping

The Newfoundland Surveys and Mapping program received Federal funding assistance from 1968 to 1977 but has been 100 percent provincially funded since 1978. The Division requires additional funding: to provide standard digital base map data for resource managers; to initiate a province-wide system of property mapping; to continue maintenance

of the Geodetic reference system; to convert the large scale base mapping program to digital format and to provide technical leadership that will ensure standardization in GIS data.

A new proposal for a five year Canada/Newfoundland cost shared agreement in Surveying and Mapping was drafted in 1989. Efforts are continuing to promote this proposal as the basis for a new five year cost shared agreement.

PARKS DIVISION

Donald Hustins - Director

INTRODUCTION

Parks Division is responsible for the administration, management, planning and establishment of Newfoundland and Labrador's Provincial Parks and the management of Wilderness and Ecological Reserves. The Division also provides liaison with the Canadian Parks Service in planning natural history programs of National and Marine Parks and is also a member of the Canadian Heritage Rivers System.

The Division has a goal statement which identifies the basic intent and aim of the parks system and has four basic objectives. These objectives: Tourism, Outdoor Recreation, Preservation, and Heritage Appreciation specifically define program direction.

Consistent with these objectives, natural resources are protected for interpretive, educational and scientific uses. Outdoor recreational resources on the other hand are managed to provide high quality opportunities to residents and visitors.

Structure

The Division consists of four major sections. These are Administrative Support, Operations, Interpretation, and Planning and Development.

The Administrative Support Section has a permanent staff complement of 19 employees which operate out of the headquarters office in St. John's and the 4 regional offices located in Whitbourne, Notre Dame Park, Pasadena, and Stephenville. The Division also has a number of long term temporary support staff located at headquarters and the regional offices.

The Operations Section has a seasonal staff of approximately 300 (including students) who are employed during the peak season each year from April to September. These employees provide the assistance necessary to carry out the day-to-day operations necessary for an efficient parks system.

The Interpretation Section has a permanent staff complement of 2 employees located at the headquarters office. As well, a number of temporary staff, seasonal staff and students are employed during the peak season and work out of headquarters, various parks and ecological reserves.

The Planning and Development Section have a permanent staff complement of 5 employees assisted by long and short term temporary staff.

The Division has 6 different classes of parks under its jurisdiction which encompass 439,447ha or 4394.5 Sq. Kilometers. They are as follows:

PARK CLASSIFICATION	NUMBER	AREA (SQUARE KILOMETERS)
Designated Wilderness & Ecological Reserves *	9	3989.0
Provisional Wilderness & Ecological Reserves *	4	63.0
Natural Environment Parks	34	223.0
Outdoor Recreation Parks	21	7.5
Natural Scenic Attraction Parks	20	5.0
Waterway Parks	0	0.0
Park Reserves	5	107.0
TOTAL	**93**	**4394.5**

* *The Designated and Provisional Wilderness and Ecological Reserves are considered as 1 class under the parks system but have been entered separately in the above table to separately identify the number of reserves and the area (square kilometers) involved.*

With the exception of Grand Codroy Provincial Park, all others have basic facility development consisting of pit toilets and potable drinking water. Grand Codroy is the only Provincial Park which offers 3-way hook-ups per campsite, and comfort stations with showers and flush toilets. However, at Blow Me Down and Pistolet Bay Parks, new comfort stations are under construction and will be open for use in 1990.

The total Permanent staff complement is 27 and approximately 300 seasonal staff ((including students) are hired annually to operate and maintain the system of Provincial Parks.

PROGRAMS AND SERVICES

Administrative Support

The primary objectives of the Administrative Support Section are to provide the administrative support and policy direction required to operate all parks and to ensure all parklands are administered with regards to good public health and safety standards. This section is also responsible for formulating policy and legislation required for the system of parks and to ensure the natural and physical resources contained in all parks are protected. It also provides the administrative and clerical support for the Division at headquarters.

A report entitled "A Comprehensive Plan and Revitalization of the Provincial Parks" was prepared during the year. The purpose of the plan was to identify the recapitalization problems facing the parks system and to integrate the parks system into the overall tourist industry of the Province. Subsequent discussions were held with Tourism officials to ensure parks projects were considered in their agenda.

Newfoundland agreed to host the 29th Annual Conference of the Federal/Provincial Parks Council. The conference is scheduled to be held in St. John's, during July, 1990. The planning and organization of this conference was initiated during the year.

The Director of Provincial Parks was elected Vice-chairperson of the Canadian Heritage Rivers Board for the year and agreed to host the 1990 Board meeting in Newfoundland.

In 1986, the Division initiated a full assessment of the nature and dimensions of parks maintenance and recapitalization problems for the entire parks system. The review was undertaken over a three-year period and was completed in August. The final report established several major objectives with regards to maintenance and recapitalization. These included the production of five year maintenance and recapitalization plans; the

development and implementation of new standards; the determination of priorities to improve the quality and effectiveness of current and future programs; and the forecasting of major future requirements.

Operations

The primary objectives of the Operations Section are to operate and maintain a system of parks; to maintain each park to an acceptable health and safety standard for the public; to provide opportunities for quality outdoor recreation in a natural environment and to protect the physical and natural resources of each and every park.

A total of $505,500 was expended on capital projects. These projects were: Basic Improvements and Upgrading ($214,100), Critical Upgrading ($141,400) and Occupational Health and Safety ($150,000).

In cooperation with the Gander Community Employment Corporation, a handicapped person was hired at David Smallwood Park. This person was given the opportunity to work at all required duties in the park and completed most functions well.

Once again a seasonal campsite draw was held for Butter Pot and Gushue's Pond Provincial Parks. This draw was necessitated by the high demand for seasonal campsites in Provincial Parks. The draw was held prior to the start of the operating season and the successful applicants were permitted to move their equipment on the sites at these two parks before their scheduled opening date.

During the winter months, regional staff were involved with providing winter patrols in many parks, assisting with the cross-country skiing programs at Butter Pot, Dildo Run, Notre Dame, Jonathan's Pond, and Stag Lake, and with winter camping at Gushue's Pond and Square Pond.

With the exception of Backside Pond and Bellevue Beach which opened two days earlier to accommodate high demand, Blue Ponds which opened one month earlier to accommodate increased use in that part of the Province, and Grand Codroy which opened two weeks later due to low visitor use and possible freezing risks to its water system, all parks opened at the same time as in 1988. This meant that 17 camping parks with 1,322 campsites were open for the Victoria Day weekend, 7 camping parks with another 385

campsites opened on June 2, and the remaining 18 camping parks with 610 campsites opened June 23. As well, on that day the day-use and natural and scenic attraction parks opened.

Visitors to Provincial Parks in 1989 decreased from 1988, while camper nights increased from 1988.

	1988	1989	Increase (Decrease)	Nfld	Other Canada	U.S. & Foreign
Visitors	1,763,408	1,596,202	(10%)	88.1% (1,406,254)	7.6% (121,3ll)	4.3% (68,637)
Camper Nights	401,948	428,072	7%	87.2% (373,279)	8% (34,246)	4.8% (20,547)

Information/Education

The primary objectives of the Information Education Section are to instill an awareness and appreciation for the natural and cultural heritage of provincial parks; to educate visitors on the resources of the parks system; to provide the public with visitor information about the parks system; and to encourage visitor participation in programs which will increase their recreational experience and opportunities.

Under the capital budget, a major exhibit was produced which gave the name of the park, described the park's classification, a basic description of the park, as well as prominently displaying the Division's logo, the Pitcher Plant. The exhibit was constructed using porcelain enamel and was placed at the entrance of 4l parks.

A new salmon display was also produced, with fifteen exhibits being fabricated using porcelain enamel. These exhibits are to be erected in parks that are in close proximity to major salmon rivers. The production of this exhibit was funded by a Federal/Provincial Inshore Fisheries Development Agreement, through the Salmon Association of Eastern Newfoundland and cost $15,000.

Under the auspices of funding from the Tourism Agreement a consulting group was retained to undertake a study of the Cape St. Mary's Seabird Ecological Reserve. This study developed design options for natural heritage resource interpretation facilities, as well as tourist services.

The first three stages of an Interpretative Systems Plan, including the identification of natural regions, was completed by a student from the Quebec-Labrador Foundation. A consultant was hired to prepare a draft of a Teacher's Guide to studying provincial parks.

Park publications were completed for Square Pond, J.T. Cheeseman, Notre Dame, Jonathan's Pond and Jack's Pond, as well as fact sheets for the Cape St. Mary's Seabird Ecological Reserve and the Mistaken Point Ecological Reserve.

"Our Waterways", was chosen as the theme for Interpretation Week, 1989. As part of the planning for this event, high school students were invited to submit illustrations for the brochure. A drawing of the Kingfisher was selected as the symbol of interpretation week.

The head of the Interpretation Section was elected chairman of the 12th National Interpreters' Conference which was held in St. John's. Several divisional staff played a major role in organizing this conference.

Planning and Development

The primary objectives of the Planning and Development section are to provide the overall short and long-range planning for parks; to initiate and administer land acquisition proceedings, legal surveys and proclamations of parklands; to prepare site development plans and design and layout of all new facility development; and to prepare construction guidelines and facility development standards.

Due to an increase in the Capital budget of this section, several construction projects were undertaken. Under the auspices of the Canada/Newfoundland Tourism Agreement, $135,000 was expended to partially construct a comfort station at Pistolet Bay, and $82,000 was spent to complete the comfort station at Blow Me Down.

At Sandbanks Park, construction of a campground was begun. At Butter Pot Park, a new interchange with the Trans Canada highway was constructed, and as well, the park kiosk area was upgraded and paved.

The section was involved with the planning, design and construction of a 5 Km competitive cross-country ski trail and chalet in Notre Dame in conjunction with the 1990 Winter Games Committee. This is the first such competitive trail in a Provincial Park, and it was open for use mid-winter for the 1990 Newfoundland Winter Games. In addition to the trail, a chalet-activity centre was constructed which will also be available for year-round use.

Staff of the Planning and Development Section were involved with the Private Sector Initiatives Program. Eight concessions were operational, including mini-golf at Butter Pot, boat rentals at Butter Pot and Cochrane Pond, a canteen at Salmon Cove Sands and convenience stores in Square Pond, Notre Dame, Squires Memorial and Barachois Pond.

Planning continued its work with the Canadian Heritage Rivers Systems Program (CHRS). During the year, a background study of the Main River was completed by Ledrew-Fudge and Associates Ltd. This study concluded that, based on its outstanding natural and recreational values, the river is highly suitable for nomination to the CHRS. Ledrew-Fudge also compiled a nomination document for this river. As well, a study of the Exploits River, for possible nomination to the CHRS, was conducted by three students from the Quebec/-Labrador Foundation.

Staff of this section were involved with a program being carried out by the Protected Areas Association towards defining and mapping the Province's natural regions.

Emergency plan maps, showing locations of safety and emergency equipment, as well as possible evacuation routes, have been created for all staffed parks, and placed in both the entrance stations and the park cabins of these parks.

The process by which park user statistics are collected and summarized have been revised. Beginning with the 1990 season, instead of a different permit for each type of park usage, one permit will now be used. A copy of each of these permits will then be sent to headquarters on a weekly basis, where the information will be summarized by direct entry into the computer.

Draft management plans were drawn up for the Cape St. Mary's Seabird Ecological Reserve and the Witless Bay Island Seabird Ecological Reserve. Meetings continued to be held to revise and update these plans with the hope of having them implemented in the near future.

SPECIAL EVENTS

The Wilderness and Ecological Reserves Program saw the establishment of the Bay du Nord Wilderness Reserve (2,895 Sq. Km) and the Table Point Ecological Reserve(1.16 Sq. Km.) and a provisional ecological reserve at Fortune Head.

With the addition of these new reserves 1.8 percent of the area of the Province is now protected under the Federal and Provincial Parks Systems.

STAFF DEVELOPMENT AND TRAINING

During the year, a number of staff employed in various sections of the Division completed courses in fire prevention, first aid and emergency first aid. A number of support staff also completed a Record Management course. An employee within the Interpretation Section attended professional development training in the United States on interpretation planning strategies. As well, an employee within the same section completed Units 1 and 2 of the course in Basic Museum studies.

FUTURE GOALS/OBJECTIVES/TRENDS

A major goal of the Division is to ensure that all parks continue to offer safe and healthy opportunities for outdoor recreation to all visitors. In this regard, emphasis will be placed on completing the maintenance management manual and updating the capitalization program. In addition, new avenues will be explored to ascertain the opportunities of incorporating the parks system into a tourism agreement in order to enhance facility development in parks.

A second major goal of the Division is to develop a comprehensive park plan. This plan should include a review of all divisional programs and address the problems and opportunities facing the system of Provincial Parks from a recreation, tourism and

preservation perspective. Included in this review should also be a survey of park users to determine their needs and aspirations of the park system.

The third major goal is to define and map the Province's natural regions. The Division will be working with the Wilderness and Ecological Advisory Council and the Protected Areas Association of the Province to determine an approach to jointly implement this program.

WILDLIFE DIVISION

David Pike - Director

INTRODUCTION

The mandate of the Wildlife Division is to maintain the ecosystems upon which wildlife and people depend and to do so recognizing the values of the diversity and abundance of wildlife species and populations; to provide for the humane and sustainable use (both consumptive and non-consumptive) of wildlife; and to help establish and maintain a social environment that is conducive to effective wildlife conservation.

Structure

The Division is organized around four sections:

Administration — Responsible for overall direction, policy establishment and implementation, regulation changes, licence sales, the big game licence draw, and clerical support;
(Permanent staff complement - 6)

Protection — Responsible for prevention of violations and enforcement of the Regulations of the Wild Life Act;
(Permanent staff complement - 49)

Research and Management — Responsible for biological investigations and monitoring of wildlife populations as well as the implementation of management practices to sustain viable populations of all species;
(Permanent staff complement - 34)

Information and Education — Responsible for informing and educating the public about wildlife and its habitat to foster public attitudes and actions which are compatible with our wildlife resources and management and protection practices. This Section includes Salmonier Nature Park.
(Permanent staff complement - 10)

Because of the need to provide services throughout all the Province, the Division has a headquarters in St. John's and 4 regional offices as well as a number of smaller district offices.

Some of the activities of the Division such as public relations and the hunter capability test cross over Section affiliations and are carried out by many staff members regardless of the Section to which they belong.

Legislation

The primary legislation governing the activities of the Division is the Wild Life Act and its associated Regulations.

PROGRAMS AND SERVICES

Administration

Big Game Licence Draw

The number of applicants for a moose or caribou licence grew by about 3,000 in 1989 to 33,202. The number of licences issued was 20,488 (2,997 more than in 1988).

Expanding use of Microcomputers

In the last few years most of Wildlife Division offices have been equipped with microcomputers. This has allowed most of the standard office procedures to become computerized. In addition the sale of black bear licences and associated statistics has been computerized.

Licence Sales

The sale of some licences straddles the usual year end, so figures are only available for the 1988-89 year. They are:

Licence Sales 1988-89

Moose	Residents and Nonresidents	18,077
Caribou	Residents and Nonresidents	2,411
Bears	Residents and Nonresidents	4,877
Ptarmigan and Grouse	Residents and Nonresidents	12,237
Hares	Residents and Nonresidents	34,833
General Trappers	Residents only	2,252
Beaver	Residents only	720
Salmon	Residents and Nonresidents	23,169
Trout	Nonresidents only	3,953
TOTAL		102,529

Research and Management

Moose

The moose population on the Island appears to be at its highest recorded level and is now estimated to be in excess of 120,000 animals. However, densities vary from area to area, with populations generally increasing in central and western Newfoundland, and slowly decreasing in the remote portions of southern and eastern Newfoundland.

Aerial surveys were done in Management Areas 2 and 19 and the inaccessible portions of Areas 3(90), 26(93), 27(94), 37(95), and 39(96). In these latter areas, moose are over-browsing their range and action is being taken to bring their numbers in line with the declining habitat. Two other areas, 15 and 16, were also surveyed where moose densities were reported high and where thinned stands of balsam fir had been damaged by browsing.

Research on moose over the past 5 years has largely focused on calf production/-recruitment studies in the Northwest Gander area. Over the past 2 years, this work has expanded into the less accessible Middle Ridge area in order to compare moose population dynamics between there and the richer habitat of Central Newfoundland. Results to date suggest that nutrition and habitat quality are important in determining the condition and reproductive performance of moose. Also, more moose must be harvested in remote areas to maintain the integrity of the habitat.

Caribou

It is estimated that on the Island, we now have approximately 50,000 caribou, a number that is probably approaching the highest estimated historic records. Continued growth can be expected in many areas as range expansion continues but some regions have probably reached optimal densities.

Counts were conducted on the Humber and Gaff Topsails herds. Results from the former are still being analyzed. The Gaff Topsails herd is estimated to number 4,800 animals. Classifications were conducted on the Middle Ridge and LaPoile herds.

In Labrador, the George River herd was estimated to be around 700,000 animals in 1988. Biologists working on the herd now unanimously agree that numbers are declining at a rate of about 7 percent per year. The population is now less than 600,000 animals. About 30-40 very high frequency (VHF) collars are working on George River animals but monitoring these collared animals occurs infrequently and is concentrated during the critical periods because of the high cost of aircraft. The Mealy Mountain Herd is stable at 2,000 animals. It is capable of growth but none is occurring because the mortality rate is about the same as the survival rate. The Red Wine Mountain Herd is estimated to be stable at around 700 animals.

Caribou Stag

Bears

Our knowledge of bear populations lags far behind that for moose and caribou and is still inadequate for what is needed for good management, especially as it relates to hunting. Nonetheless, bear populations seem to be healthy, widespread and stable.

The main study on bears is occurring in the Northwest Gander area. This capture/radio-collaring work has been under way for the past 5 years. It has shown that density in this prime habitat is about 0.5 bears per k^2 and movements between seasonal feeding ranges have been greater than 80 k.

Small Game

A project to improve ptarmigan habitat using controlled burning was in its second year of a 5 year term. It is a cost shared program between the Division and Wildlife Habitat Canada. Work was carried out on 2 sites - Fairhaven and Chance Cove on the Avalon Peninsula. A graduate student using radio telemetry techniques is studying brood dispersal in different types of plant cover.

The ptarmigan/grouse hunter questionnaire was conducted again this year. A random sample of 2,500 hunters were selected from the licence sale records. This information is used to estimate the annual harvest and to determine population trends.

Furbearers

Coyotes are established on Newfoundland Island. The first confirmed report was in 1987 near Deer Lake and seven more have been either trapped or road-killed since that time in the Deer Lake area or on the Northern Peninsula. A trapping season was established in 1989/90 during which three animals were apparently taken. Their numbers in Newfoundland are expected to grow since evidence from other North American locations indicates that eradication and control measures are largely futile.

A muskrat habitat improvement project is underway in western Newfoundland involving the Division, Habitat Canada, the University of Wisconsin, and the Newfoundland and Labrador Trappers' Association. A graduate student working in association with this project has been examining the influence of mink on muskrat populations.

Lynx populations are very low. The trapping season has been closed since 1987 and populations have been monitored. In 1989, there was an indication of marginal improvements in lynx numbers.

There has been considerable interest amongst fur farmers in the breeding and rearing of lynx. In response to this interest, the Newfoundland Fox Breeders Association was given permission to live-trap 12 lynx during 1990.

New humane trapping regulations were passed in 1989 so that they generally concur with national standards.

A Trapper Education and Furbearer Management Committee was set up involving the Provincial Trappers' Associations and Divisional staff. The Committee will assist with the establishment of a Trapper Education program and with the assessment of a variety of management strategies for furbearers including registered trap lines.

Non Game

Piping plovers, an Endangered Species in Canada, were known to have occurred on at least 5 beaches in Newfoundland. During 1989, we learned that their present population is down to 4 nesting pairs on Big Barasway near Burgeo. Attempts to establish a reserve in the area to protect the nesting habitat were initiated in 1989 but not concluded.

Peregrines are an endangered species in Canada. From 1989 surveys, we have learned that one of the larger populations in eastern North America is in Labrador. During 1990, all known nest sites are to be revisited to determine occupancy. This is part of a North American survey conducted every 5 years. In addition, field studies at Nain Bay will be examining food sources, genetics, and pesticide residues. A survey of the Kogaluk River will also be conducted to search for new nest sites. The work is cost shared with the World Wildlife Fund, the Department of National Defence, McNamara Construction, Fudge Associates, and the Natural History Society.

A "No Hunting Area" was established to protect waterfowl in Middle Arm near Carmanville. The area is a candidate for a Wildlife Reserve.

Environment and Wildlands

Cooperative studies are under way in association with the impact of the Hope Brook Gold Mine on wildlife. To date, data indicate that caribou avoid the area in winter and during calving. We have also learned there is rather high mortality in the LaPoile area due to falls from cliffs but this is not associated with the impact of the mine. This work will continue until 1991 at which time a new arrangement will be renegotiated.

A study to determine the impact of logging on caribou is also under way in cooperation with Abitibi-Price and Habitat Canada. This work on the Middle Ridge/Mount Peyton herds so far indicates that caribou use 3 year old and older cutovers more than anticipated. Does with calves avoid areas where there is existing logging activity but stags

and does without calves seem to tolerate it. Some segments of the herd choose forested areas in which to calve. This work has already resulted in 2 M.Sc. theses and a 3rd is expected.

The Department of National Defense is constructing 4 short range radar sites along the Labrador coast. At 3 of these sites, there are peregrine falcon nests within 10k. At the 4th site, there is a concern for Torngat Mountain caribou. Therefore, the Wildlife Division, in cooperation with the Department of National Defense will be monitoring the effects of the construction activity.

Protection

The following table summarizes the prosecutions of the Protection Section:

Type of Charge	No. of Violations
Wildlife Regulations	351
Obstruction	6
Migratory Bird Act	21
All Terrain Vehicle	46
Provincial Parks Regulations	10
Fisheries Regulations	4
Total	438
Total Fines Levied	$133,000

In addition to the fines levied, several convictions involved jail terms and the forfeitures of equipment such as vehicles, snowmobiles, ATV's, rifles, etc.

There were some investigations into the misuse of Big Game Tags which have resulted in charges being laid and three convictions so far. The violations involved opening and reusing tags.

Another area of concern is the number of people applying for resident Big Game Licences who are not provincial residents. Some convictions have resulted from this infraction.

Information and Education

Project Wild is an environmental education program designed to be integrated with our school system. Focusing on wildlife, it is for use in all grades from Kindergarten to Grade 12 and in most subject areas. It is a package of activities that will complement and enrich the existing program of study; it will not replace anything that is now required. It consists of two manuals (one for primary and elementary, the other for high school) of environmental education activities for teachers to do with their students. Each activity deals with some wildlife-related concept and also assists with the teaching of other concepts and skills required in subjects like social studies, language arts, mathematics, art, music, physical education and science. It was analyzed intensively to determine its suitability for this Province's schools. In October, it was approved for implementation by the Department of Education. The first workshops to train teachers were held in December.

Salmonier Nature Park is a major component of the Division's education programs. Major renovations of enclosures and the trail system are under way to improve deteriorating structures and to make the park's features more accessible to those with limited mobility. In addition to the education activities that occurred at the park, a school visit program was developed that featured endangered species especially peregrine falcons. A new, full-colour poster and brochure were developed as a result of funding assistance through the Department of Development.

In Hunter Education, we developed new versions of the Application Guide and the Hunting Guide. Approximately 4,000 people were tested in the Hunter Capability Test bringing the total number of people who have passed it to about 80,000.

There were no staff members dedicated to Trapper Education after June, 1989, so progress in this area was limited. Nonetheless, the Labrador Community College was contracted to develop a Trapper Education Plan using the Community College system as a delivery mechanism.

Over 6,000 education kits celebrating National Wildlife Week were sent to every school in the Province. In addition, mall exhibits and school visits were carried out throughout the Province. For the poster contest, one of the 10 Provincial winners was also selected as the overall Canadian winner.

In addition to the above activities, hundreds of requests for wildlife information were answered. A Peregrine Falcon poster was also developed.

ACTIVITIES

Eastern Habitat Joint Venture

The Division has been involved with the development and implementation of the North American Waterfowl Plan. Through its enabling mechanism, the Eastern Habitat Joint Venture, a project to protect and enhance waterfowl habitat in the Birchy Basin, is under way. Over the 5 years of the agreement, $500,000 will be invested in water control structures, nest boxes, and a stewardship agreement with Corner Brook Pulp and Paper. Four additional proposals valued at $1.5 million are under development for other areas of the Province.

Geographic Information System

Much of the information that the Division uses requires the correlation of data with geographic areas, for example, correlating habitat types in certain areas with moose densities. When several types of data are applied to the same area, the ability to analyze it can become extremely complicated and the production of maps by hand to represent the information can become excessively burdensome. To help resolve this problem, the Division has begun a computer-based Geographic Information System. The hardware and software were acquired in 1989/90 and the training for and implementation of the system will begin in 1990/91.

SPECIAL EVENTS

Federal Provincial Wildlife Conference

From June 20-23, 1989, the Division played host to the 53rd Federal-Provincial Wildlife Conference. The theme was Integrated Land Management for Wildlife - Fact or Fiction.

North American Moose Conference

The Division hosted the 25th North American Moose Conference from July 9-14, 1989. Aside from technical talks on moose research and management, there was a full day devoted to papers and discussion on the importance of education and public participation in moose management.

North American Caribou Workshop

From November 1-3, the Division successfully hosted the 4th North American Caribou Workshop. It attracted caribou researchers and managers from throughout North America, Greenland and Scandinavia.

STAFF DEVELOPMENT AND TRAINING

A number of Management Officers participated in an introductory course in microcomputers. Some also received training in radio telemetry techniques and equipment. Some Protection Officers were trained in the use of immobilizing drugs and also received some training from the Newfoundland Constabulary in self defense.

FUTURE GOALS/OBJECTIVES/TRENDS

During 1990/91, a review of the organizational structure of the Wildlife Division will occur particularly addressing the feasibility of broadening the Protection Section to cover other enforcement duties for the full Department.

A new Wildlife Policy for Canada will be subject to public review during 1990/91 and is likely to be adopted during that year. When this is completed, Provincial policies will have to be reconsidered and modified to comply as closely as possible with it.

FINANCIAL AND GENERAL OPERATIONS DIVISION

Frank Harris - Director

INTRODUCTION

Under the direction of the Director of Financial and General Operations, this Division is vested with the responsibility for the co-ordination and implementation of Government administrative policies. This responsibility includes the control, management, and regulation of all financial and administrative aspects of the various divisions of the Department.

The Division's structure includes an Accounts Payable Section, Accounts Receivable Section, and a General Operations Section. The duties applied to each section are provided by a permanent staff complement of thirteen and temporary assistance when required.

The activities of the Division are governed by the Financial Administration Act, the Public Tender Act, The Purchasing Policies and Procedures, and Travel Regulations.

PROGRAMS AND SERVICES

Accounts Payable Section

This section is responsible for the receipt and checking of invoices and travel claims to ensure that they comply with Government's Purchasing and Financial Regulations, and the processing of these documents through the Department of Finance's computerized Financial Management Information System. This section's mandate is to achieve Government's objective of processing payables within a 30 day period. Staff changes and restructuring made this a difficult task, but a concerted effort was made to maintain this objective on a monthly basis.

Accounts Receivable Section

This section is responsible for the collection and control of revenue derived from services provided by the Department. Revenue in the amount of approximately $5 million is collected annually. This revenue is generated through the sale of fish and game licences,

park permits and fees, topographical and air photo maps, and rental fees on Crown Land permits and leases. Staff are tasked with the responsibility of collecting revenue on a timely basis as per procedures outlined in the Government's Accounting Instructions.

General Operations Section

This section is responsible for the co-ordination, control, and provision of the internal Administrative Support Services within the Department including Office Administration, Transportation Services, Inventory Control, Communication Services, and Records Management Services.

Office Administration

This includes coordinating the Department's office accommodation requirements with the Department of Works, Services and Transportation and the provision of office furniture and equipment.

Transportation Services

This includes the management of the Department's vehicle fleet operations.

Inventory Control

This includes the development and maintenance of inventory systems and procedures.

Communication Services

This includes the co-ordination of the Department's communication services requirement, such as telephones, fax machines, and photocopiers.

Records Management Services

This includes the provision and control of the Department's records management in a central registry.

The following table summarizes some of the activities of the Financial and General Operations Division including budget, information processed, revenues generated and permits and licenses sold.

1989/90 STATISTICS	
Gross Budget (Department)	$26,365,000
Revenue	$2,513,400
Net Budget	$23,851,600
Invoices Processed	18,000
Vouchers Processed	12,000
Imprests Processed	153
Travel Claims Processed	2,500
Revenue - Wildlife	$2,245,100
Revenue - Parks	$641,400
Revenue - Crown Lands	$1,715,700
Park Permits	64,000
Big Game Licenses	22,500
Small Game Licenses	42,975
Crown Lands Leases/Permits	15,000
Salmon and Trout Licenses	23,500

STAFF DEVELOPMENT AND TRAINING

Due to the complex and numerous difficulties encountered in the transition year, staff training and development received very little priority due to the divisions emphasis on reviewing existing programs, policies and procedures. However, the need for increased specialized training in the areas of computerized accounting systems was identified and plans formalized to undertake more development and training in computerized systems in the next fiscal year.

FUTURE GOALS/OBJECTIVES/TRENDS

To stay abreast of today's trend of computerization of the accounting function, the division will be undertaking detailed studies of its entire operations, especially the Accounts Receivable Section, with a goal of having its operations computerized wherever possible. These studies will especially concentrate on the Crown Lands and Small Game Licensing systems as well as the division's vehicle management systems and a proposed inventory system.

It is recognized also that staff of the division will require specialized training or upgrading in all aspects of micro computer applications in relation to the division's functions. It is planned to secure approval of EDP training funds in the budget process to enable selected staff to acquire the necessary computer training at one of the colleges offering a certificate program in micro computer applications for business.

This conversion to computer systems and training of staff can enable the division to carry out its function more efficiently, providing more accurate and current information for use by management.

HUMAN RESOURCES DIVISION

Catherine Mullins - Director

INTRODUCTION

The Human Resources Division is responsible for the management and administration of the complete Human Resource Management Programs of the Department of Environment and Lands and the payroll and benefits functions of the Department.

The Division currently has six staff, all located at head office in St. John's.

In 1989/90, the Department had a seasonal peak of approximately 700 employees in 40 different communities and 44 provincial parks throughout the province. The total departmental salary budget for 1989/90 was $12,382,600.

The Division's authority to carry out its mandate includes the enforcement of the Personnel Administration Procedures, Payroll Procedures, various collective agreements, staffing under delegated authority of The Newfoundland Public Service Commission Act, 1973, and various Minutes in Council and Treasury Board Authorities.

PROGRAMS AND SERVICES

The programs and services administered by the Human Resources Division can be broken down into a number of broad categories. These are:

Pay and Benefits

In 1989/90, the payroll section of the Human Resources Division processed approximately 3,000 Payroll Action Memoranda and 2,800 Overtime and Special Payment Reports. This included 379 staff hirings, 392 terminations, and approximately 100 Travel Time Credit Accumulation and Request for Compensation claims. The major activities of the year included integration of files for the newly restructured Department, the movement of all leave recording to the payroll section and the development of a new payroll system for the provincial parks.

Recruitment and Classification

In 1989/90, a new staffing policy was developed for the Department which saw Human Resources take on responsibility for chairing all departmental competitions. Initial appointments and promotional opportunities during the year required 78 postings of which 31 were processed through the Public Service Commission and the balance handled by the Human Resources Division. The 47 processed by the Human Resources Division included 20 seasonal and 27 temporary positions.

In addition to the number of recruitments, there were 87 reclassifications of positions in 1989/90.

Labour Relations

There were nine official union grievances received by the Human Resources Division in 1989/90. Three of these were settled without going beyond the first level of the grievance process. Three progressed and were settled at the committee stage, and three are scheduled to go to committee. Other grievances and complaints were resolved through consultation and discussion at the intermediate and lower management levels.

Training and Development

Due to the restructuring of the Department, there was very little activity in this area in the 1989/90 year. However, there are plans to hire a Training Officer who will be responsible for this area in the future. The Training Needs Assessment Program was developed in the former Department of Culture, Recreation, and Youth and will be continued in the new Department.

Miscellaneous

In addition to the above-noted activities, the Division was involved in occupational health and safety, injury on duty, employment equity, service recognition, budgeting, etc. 1989/90 saw the introduction of a salary monitoring program, the organization of a departmental occupational health and safety committee, as well as the Division's extensive involvement with Treasury Board in planning a government-wide human resource management information system.

FUTURE GOALS/OBJECTIVES/TRENDS

In future, the Division hopes to implement a variety of programs designed to enhance the performance and job satisfaction of employees. The first step in this program will be the implementation of the Training Needs Assessment Program and the development of in-house training courses and developmental assignments.

SYSTEMS AND METHODS DIVISION

Vacant - Director

This Division was not staffed in 1989/90.

APPENDIX

The following table provides a comparison of actual expenditure by program for both current account and capital account for the fiscal years 1988-89 and 1989-90 as included in the Public Accounts of the Province.

PROGRAM FUNDING SUMMARY

GROSS EXPENDITURES

	CURRENT ACCOUNT		CAPITAL ACCOUNT	
PROGRAM	**1988-89**	**1989-90**	**1988-89**	**1989-90**
Executive & Support Services	1,106,300	1,911,700	---	---
Environmental Management & Control	4,361,700	5,700,200	Nil	47,000
Provincial Land Management	3,338,700	3,825,900	56,400	74,400
Parks	Nil	4,155,500	Nil	982,100
Wildlife	Nil	6,067,400	Nil	31,800
TOTAL:	8,806,700	21,660,700	56,400	1,135,300

NOTE:

(1) All figures rounded to $100;

(2) Parks and Wildlife Divisions added with government re-structuring in 1989-90;

(3) Transfer Accounts not included.

Also provided in the table below is a departmental summary indicating the actual expenditure for those fiscal years indicated.

SUMMARY			
FISCAL YEAR	**CURRENT ACCOUNT**	**CAPITAL ACCOUNT**	**TOTAL**
1988-89	8,806,700	56,400	8,863,100
1989-90	21,660,700	1,135,300	22,796,000

The total complement of legislation currently administered by the Department comprises of the following:

1. The Department of Environment and Lands Act
2. Mobile PCB Destruction Facility Regulations, 1989
3. The Prevention of Misfuelling of Light Duty Vehicles Regulations, 1986
4. The Storage and Handling of Gasoline and Associated Products Regulations, 1982
5. Air Pollution Control Regulations, 1981
6. The Environmental Control (Water and Sewage Regulations), 1980
7. The Environmental Assessment Act, Ch. 3 (1980)
8. The Environmental Assessment Regulations, 1984
9. An Act to Amend the Environmental Assessment Act, Ch. 51 (1983)
10. The Pesticides Control Act, Chapter 52 (1983)
11. The Pesticides Control Regulations, 1984
12. The Pesticides Control Act (Licensing) Regulations, 1978
13. The Waste Material (Disposal) Act, 1973
14. The Storage of PCB Wastes Regulations, 1988
15. An Act to Amend the Waste Material (Disposal) Act, No. 63 of 1975-76
16. The Waters Protection Act, Chapter 394

17. The Well Drilling Act, Chapter 14 (1981)

18. The Well Drilling Regulations, 1982

19. The Abandoned Lands Act

20. The Administration and Control of Lands of the Crown (Transfer) Act

21. The Crown Grants Proceedings Act

22. The Crown Lands Act

23. The Development Areas (Lands) Act

24. Labrador Lands (Reservation) Act

25. The Land Development Act

26. The Newfoundland Geographic Names Board Act

27. The Reservation of Lands to the Crown Act

28. The Unimproved Lands (Redistribution) Act

29. The Veterans Land Settlement Act

30. The Provincial Parks Act

31. The Wilderness and Ecological Reserves Act

32. The Wild Life Act, The Revised Statutes of Newfoundland, 1970, Chapter 400